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# A DEFINITION OF CURIOSITY, A FACTOR ANALYSIS STUDY.

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AN INVESTIGATION WAS CONDUCTED TO DETERMINE A DEFINITION OF CURIOSITY THAT WOULD HELP IDENTIFY PERSONALITY PATTERNS OF CHILDREN WHO ARE MOST LIKELY TO BE EITHER HIGH OR LOW IN CURIOSITY. DATA COLLECTED IN EARLIER STUDIES WERE FACTOR ANALYZED TO IDENTIFY THE PERSONAL AND SOCIAL VARIABLES THAT DIFFERENTIATE CHILDREN HIGH IN CURIOSITY FROM THOSE LOW IN CURIOSITY. SEVERAL KINDS OF MEASURING INSTRUMENTS WERE USED TO DETERMINE HIGH AND LOW CURIOSITY BOYS AND HIGH AND LOW CURIOSITY GIRLS, AND TO MEASURE VARIABLES THAT SIGNIFICANTLY DIFFERENTIATE AMONG THOSE GROUPS. THESE MEASURES WERE TEACHER JUDGEMENT OF CURIOSITY, PEER JUDGEMENT OF CURIOSITY, "ABOUT MYSELF" FOR SELF-RATING OF CURIOSITY, LORGE-THORNDIKE INTELLIGENCE TESTS, THE CALIFORNIA TEST OF PERSONALITY, A SOCIAL DISTANCE SCALE CALLED "OTHER PEOPLE TEST," THE BEHAVIOR PREFERENCE RECORD, THE CHILDREN'S PERSONALITY QUESTIONNAIRE, THE WORD ASSOCIATION TEST (CREATIVITY), THE CASSEL GROUP LEVEL OF ASPIRATION TEST, PEER JUDGMENT OF SOCIAL BEHAVIOR, THE INSTITUTE OF CHILD STUDY SECURITY TEST, THE INTOLERANCE OF AMBIGUITY SCALE, THE SOCIAL ATTITUDES SCALE, DESCRIPTIVE WORDS (MORALITY), AND THE SITUATIONAL INTERPRETATION EXPERIMENT. FACTORS IDENTIFIED BY THE ANALYSIS WERE DESCRIBED IN RELATION TO EACH OF THE FOUR GROUPS STUDIED. FROM THE RESULTS, THE AUTHOR CONCLUDED THAT THERE ARE PERSONAL AND SOCIAL FACTORS THAT DIFFERENTIATE THESE FOUR GROUPS, AND THAT, ALTHOUGH CURIOSITY AS A TERM HAD NOT BEEN DEFINED, THE BEHAVIOR OF THOSE WHO SHOW DIFFERENT ASPECTS OF CURIOSITY WAS SET FORTH MORE CLEARLY THAN IT HAD BEEN BEFORE. (AL)

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# A Definition of Curiosity:

## A Factor Analysis Study

Cooperative Research Project No. S-109

Wallace H. Maw

University of Delaware

AA000134

"It is truth very certain that, when it is not in our power to determine what is true, we ought to follow what is most probable!"

Rene' Descartes

# A Definition of Curiosity,
## A Factor Analysis Study

Cooperative Research Project No. S-109

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Newark, Delaware
1967

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## The Problem

The term "curiosity" is understood by almost everyone, yet no two people will agree as to its exact meaning. The reader can easily verify this statement by asking his friends to define curiosity. They will define it in terms of such synonyms as intrusiveness, nosiness, exploring behavior, or probing. However, when pressed for clarification, they may not place equal ethical values on each of the synonyms. They may claim that curiosity is a positive characteristic. On the other hand, they may not exhibit the same assurance when asked about the defining synonyms.

This confusion is just as apparent when theoretical explanations are examined. Many of these statements are based on considerable research conducted under controlled conditions. Among the explanations which have been set forth to account for the results obtained in experiments designed to study arousal phenomena, including curiosity, at least two distinct groups of theories can be identified (72). One group that may be classified as "tedium" theories, holds that the organism will explore something new because it is bored with the present situation (86). The other group of theories that may be considered "titillation" theories, tries to account for the organism's behavior by postulating that it is attracted to novel aspects of the stimuli (3). These latter theories appear to be similar to the popular conceptions held regarding curiosity. None of these theories, however, clearly describes the nature of curiosity of children living and learning in an elementary school environment.

Since there is confusion regarding the meaning of curiosity, it is appropriate that some effort be made to define it. In order to do this, several directions might have been followed. On the one hand, an analysis might have been made of behavior labelled "curiosity." On the other hand, the personality characteristics of children who were considered to differ in "curiosity" might be examined. In this study, the latter line of investigation was followed.

Differences in manifestations of curiosity which may be attributed to neurophysiology are not considered directly in this study, although such differences might be helpful in formulating a definition. Both Berlyne ( 3 ) and Hebb (31) have explored this area.

It is the purpose of this investigation to try to find a definition that will help discriminate with a high degree of probability those children most likely to exhibit a high level of curiosity from those who do not. More specifically, this definition should help to identify personality patterns of children who are most likely to be either high or low in curiosity.

Although an earlier study had revealed many significant personal and social variables differentiating children high in curiosity from those low in curiosity (56), the findings did not lend themselves to this type of definition. The number of variables investigated would have made the definition too long and too complex to be meaningful. However, an examination of the variables measured indicated that there may actually be fewer underlying differences than would at first seem to be the case. In other words, by identifying the factors which are common to many of these variables and which account for most of the variance of behavior considered to be manifestations of curiosity, a definition might be obtained that would be more parsimonious, more objective and, in turn, more useful than one growing out of the earlier study.

## Objectives of Study

Therefore, it was the objective of this investigation to obtain data that would make it possible to formulate a definition of curiosity based on the differences in personality shown by children differing in curiosity level. In order to do this, the large amount of data collected in earlier studies in an attempt to identify the personal and social variables differentiating children high in curiosity from those low in curiosity were factor analyzed.

By this statistical technique, it was proposed that this study might identify a limited number of factors on which to base a definition useful in distinguishing between children differing in their levels of curiosity. More specifically, answers were sought for the following questions:

1. What personal and/or social factors, if any, differentiate high-curiosity boys from low-curiosity boys?
2. What personal and/or social factors, if any, differentiate high-curiosity girls from low-curiosity girls?

3. What personal and/or social factors, if any distinguish among groups of boys and girls who also differ in their curiosity levels?
4. If such factors are identified, can they be used to formulate an objective definition of curiosity?

## Related Literature

For many years, human beings have written about the nature of curiosity. This large body of literature contains conflicting opinions because, at times, curiosity was condoned, while at other times, it was condemned. At the present time, it is valued by our culture. For example, Roe (84) considers it one for the major characteristics of all scientists.

During the twentieth century, there have been many investigations with lower animals in an effort to determine the underlying bases for curiosity. During the last decade, there has been an increase in interest in the curiosity of human beings. Some of the interest has been directed toward the study of children in classroom situations.

Much of this research has been treated very extensively elsewhere. Berlyne ( 3 ), in his comprehensive study directed at laying a foundation for a theory of curiosity, reported most of the pertinent literature in this field, especially the research conducted with lower species. Maw and Maw (48), in a report to the Cooperative Research Branch of the United States Office of Education on the measurement of curiosity, devoted a chapter to the topic. Schwartz (91) reviewed similar literature as part of her doctoral dissertation.

Maw and Maw (53) also reported the procedures used in formulating the working definition of curiosity which they used in earlier studies and which served as the basis for establishing the groups of children participating in the current study. They also wrote a chapter concerned with a sampling of the literature pertaining to the personal and social variables which logically might differentiate high-curiosity elementary school children from low-curiosity elementary school children (56).

Therefore, this review of the literature will be quite abbreviated. Its principal purpose will be to alert the reader to the many efforts that have been made and are being made to study curiosity. A few studies will be reported directly, and the reader will be referred to other sources. In addition, mention will be made of a few investigations of variables other than curiosity in order to show how closely curiosity seems to be interrelated with other aspects of the personality. Some research examining aspects of curiosity theory will be cited and the literature bearing on such variables as anxiety, creativity, intelligence, and prejudice in relation to curiosity will be examined. Some of the efforts to understand the role of curiosity in the social context--especially the effect of pressures on the development of self-concept which seems to be related in some way to curiosity--will also be reported. Finally, a few references will be made regarding efforts to evaluate or measure curiosity with more precision.

## Literature Pertaining to Theories of Curiosity

Since 1960, there has been an increase in the number of publications bearing on the curiosity of human beings. Some articles have described attempts to verify theories of curiosity, especially those postulated by Berlyne (3). A number of these articles have appeared in foreign publications. For example, Hosoda (33) discussed aspects of curiosity theory in Japanese journals.

Some researchers have attempted to subsume the several aspects of Berlyne's theory under a single rubric. One researcher, Minton (66, 67) considers stimulus complexity as being composed of incongruity, surprisingness, relative entropy, and absolute entropy. Others such as Mittman and Terrell (68) tend to support Berlyne's theory more closely.

## Literature Pertaining to Variables Bearing on Curiosity

Several studies were designed to examine the relation between curiosity and such variables as security, anxiety, creativity, intellectual functioning, and prejudice. Some studies of these variables not primarily concerned with curiosity also help increase our understanding of their relationship to curiosity.

A number of investigations have been made to examine the relationship between curiosity and security. Medinnus and Love (63) studied young children; their findings were inconclusive. The results like those of Maw and Maw (59) suggested a need for better instruments to measure both curiosity and anxiety. Caron (8) found that low n-achievement, high-anxiety individuals could maintain maximum efficiency with respect to the retention of facts, but the same individuals were severely disrupted in the grasp of principles where behavior such as curiosity was important.

It is probable that whatever effect anxiety has on curiosity, it produces its effect, at least in part, through the changes it makes in the child's self-concept. For example, Feldhusen and Thurston (22) showed that highly anxious children have low self-concepts. This self evaluation is reflected in many ways. Sutton-Smith and Rosenberg (93) reported that "game choices of highly anxious boys were not only feminine, they were also immature, and that some of the game choices of highly anxious girls were both masculine and above average in maturity level." Maw and Maw (56) found that low-curiosity boys were also very low in self-concepts. Highly anxious children are too concerned with "dangers" about them and do not reach out to explore their environments. They have a "high tendency to agree" with others and a "slow speed of perceptual judgment" (12). Both of these qualities seem logically to be related to curiosity.

The relationship between curiosity and anxiety is not clear and the results tend to be ambiguous. Some of this problem arises because studies of both curiosity and anxiety are limited by "ambiguities in theoretical formulation, the absence of validated methodologies, and the paucity of previous systematic research" (88). Anxiety may also have a curvilinear relationship with curiosity, as suggested by a study by Reed (83).

The relationship of curiosity and creativity has also been investigated. Getzels and Jackson (25) observed a low relationship among intelligence, creativity, and curiosity. Their sample, however, was composed of gifted children in an especially enriched school environment. Ogden and Olsen (73) tested 3488 fourth grade students in a large suburban school district which was "representative of rural and urban areas and all socio-economic levels." They found a low but significant relationship between curiosity and creativity.

Many pressures may force the child to restrict his creativity and curiosity. These pressures may, in turn, lead to prejudice which is, in itself, a detriment to the development of creativity (1). They may also cause the child to be intolerant of ambiguity which Muuss (70) claimed indicated a need to structure the world even at the expense of neglecting reality. Fuller (24) would probably point out that this same limitation causes the child to use primarily his preemptive drives because he is constantly recognizing an emergency. He does not use expressive drives needed to increase his effectiveness with his environment. These pressures lower his competence in many areas since competence, according to White (98), is an outcome of visual exploration, activity, and manipulation.

Contrary to the interpretations made regarding the work of Getzels and Jackson (25), the level and functioning of intelligence does seem to play an important role in determining curiosity level. Hoats et al. (32) discovered that high-grade mentally-retarded males showed significantly less "perceptual curiosity" than did combined groups of equal MA and equal CA normal males. Ogden and Olsen (73) found a consistent significant relationship between curiosity and intelligence. When curiosity was studied as an aspect of learning, several interesting results were reported. Paradowski (75) reported finding that curiosity arousal facilitates incidental learning. The relationship between learning and curiosity remains unclear. Sachs (87) showed that a certain level of information increases curiosity while an increased level of information does not.

Other variables which seem to directly or indirectly determine how a child manifests curiosity are his ideas regarding cooperation (79), his value system (63), his maturity (38), and the socio-economic status of his family (4).

## Literature Pertaining to Studies of the Role of Curiosity in the Social Context

There is a growing body of evidence that environmental variations may play an influential role in determining curiosity level (16). Studies of the family and curiosity have indicated that curiosity varies with social contexts.

It is, however, difficult to ascertain the direction of the cause-and-effect relationship or if such a relationship actually exists. Pangroc (74) has examined the relationship of curiosity and the child's perception of his parent's behavior. There is evidence that there is little mental illness in families of eminent persons (26) which may indicate that some environments nurture children in such a way that they feel free from debilitating pressures and are thus more apt to manifest their curiosity.

## Literature Pertaining to the Role of the Self in Curiosity

Findings from earlier investigations by the authors (56) indicated that curiosity was intimately tied to the child's self-concept. McNamara et al. (61) reported that the more curious subjects are in more veridical contact with reality and acquire information from the environment more effectively. They hypothesized that curiosity was a response system as well as a motivational system with attentional properties. The latter was borne out in a study by Maw and Maw (56) with fifth-grade children. The children read a long and involved story about animals. A week later when they were given an unexpected test on the story, high-curiosity children did significantly better than low-curiosity children.

The high-curiosity children appeared to be relatively free of anxiety. The results of the study supported Rogers (85) who claimed that when a child is threatened he will tend to exhibit neurotic behavior which will restrict his contacts with others and his competent interaction with his environment. Rogers further stated that "the more the self is free from threat; the more the individual will exhibit self-affirming behavior and---the more he will exhibit the need for, and the actualization of, participant behavior." Dalton (15) went on to claim that the self is a determiner of being which Numberg (71) tied to curiosity.

## Literature Pertaining to Attempts to Measure or Evaluate Curiosity

A number of investigators have tried to measure or evaluate curiosity. Some have used rating scales; others have used tests and records of personal observations.

McReynolds et al. (62) found significant correlations of .45 and .37 between object-curiosity scores and the teacher's rating of psychological adjustment and curiosity, respectively. The objects used were items which the pupil could manipulate while an observer scored his actions. Pielstick (80) also used object manipulation and found exploratory time during the observation period to be related to the complexity of the objects.

Results of these studies seem to differ somewhat depending upon who is making the rating. An investigation by Poore and Lang (81) indicated that there was little relationship among parent-rating, teacher-rating, and children's self-ratings of curiosity. Schwartz (91) attempted to improve teacher rating by developing a scale based on a definition of curiosity formulated by Maw and Maw (48). Penney and McCann (78) also developed a scale to measure children's curiosity. This scale was positively related to originality as measured by a modified Unusual Uses Task.

These findings indicate a need for more study in this area. The relationships among such variables as curiosity, anxiety, creativity, intelligence, learning, socio-economic status, and self-conceptualization are vague, and instruments used to measure and evaluate curiosity are still primitive.

## Procedures

It is the purpose of this study to apply factor analytical techniques to data obtained in an earlier investigation and, by this procedure, obtain an improved definition of curiosity. It is essential, therefore, that steps followed in the preceding study be set forth briefly before proceeding with a description of the organization of the present investigation. In a study entitled *Personal and Social Variables Differentiating Children with High and Low Curiosity* (56), these procedures were followed:

1. A definition of curiosity was developed, based on behavior which could be observed and rated.
2. A sample of children was obtained from a population broad enough to permit at least limited generalizations from the data obtained. An effort was then made to identify subgroups differing in curiosity level. These groups were controlled for sex and intelligence.
3. A large number of commercial, non-commercial and home-made instruments purporting to measure variables which logically seemed to be related to curiosity were administered to these subgroups.
4. The data from these administrations were analyzed and several significant differences were found among high-curiosity boys, low-curiosity boys, high-curiosity girls, and low-curiosity girls.

In the present investigation, the variables which brought out significant differences among these groups were analyzed as follows:

1. The total sample was separated into four subgroups, i.e., high-curiosity boys, low-curiosity boys, high-curiosity girls, and low-curiosity girls. In this investigation intelligence was not controlled.
2. The variables which significantly separated high-curiosity children from low-curiosity children in each of the subgroups were factor analyzed using the principal axis method (29:154-191).
3. The factors were studied in order to state what elements should be considered in a definition of curiosity.

## A Definition of Curiosity

Since the concept of curiosity is not the same for all readers, the authors found it necessary to define it more precisely for their studies of curiosity. In order to develop a definition that could be used to identify children differing in curiosity on the basis of their behavior, several steps were taken. These were described in detail in Chapter III of an earlier report, and, therefore, are not discussed here (48:25-31). The steps included informal inquiries, formal inquiries, review of dictionary definitions, an examination of the historical development of the meaning of the word, and a survey of the literature.

On the basis of this information, it was concluded that curiosity is demonstrated by an elementary school child when he:

1. Reacts positively to new, strange, incongruous, or mysterious elements in his environment by moving toward them, by exploring them, or by manipulating them.
2. Exhibits a need or a desire to know more about himself and/or his environment.
3. Scans his surroundings seeking new experiences.
4. Persists in examining and exploring stimuli in order to know more about them.

## The Sample of the Earlier Study

The present study is limited to children attending the fifth-grade in selected public schools in New Castle County, Delaware. This grade level was selected in the first investigation of this series to avoid, as far as possible, children with developmental reading problems and children whose interests were not so highly crystallized as is often the case of junior- and senior-high school pupils. It seemed advisable to continue working with this particular group in order that comparisons might be possible between the findings of both investigations.

New Castle County is a suburban area outside the City of Wilmington. There are some farms, but agriculture is limited. Large industries, especially chemical, employ the majority of the people. Many of them are working in research and development. For the most part, they have come to Delaware from other areas of the United States. The population of the area is quite mobile both as to emigration and immigration.

The State of Delaware provides special classes for the educable and trainable. Therefore, there were no children in the study with IQ's low enough to be admitted to the special classes. The mean IQ of all the children in the study was 112.01.

The sample of 557 children was further delimited to include only children for whom complete data were obtained. This group included 217 girls and 224 boys. The mean IQ of the former was 114.59 and the mean IQ of the latter was 110.12.

From these groups, several smaller groups were selected to control for intelligence which had been shown to have a product-moment correlation of approximately .36 with curiosity. This procedure was not followed in the present study since intelligence was one of the variables that was included.

In general, the children composing the sample were from middle-class families. No children were from predominantly less-chance, deprived areas. The majority of children of the upper-class families were probably attending private schools since this is traditional in the area, and there are many excellent private schools located nearby.

Since the study was limited to the fifth grade, age and grade were controlled. Therefore, no comparisons among age groups or grade groups were possible.

## The Instruments Used in the Present Study

In order to answer the questions raised in both the earlier study and the present investigation, several kinds of measuring instruments were used. Only those instruments measuring variables significantly differentiating among the four groups participating in the present study or those used to determine these groups are reported.

### Measures used in establishing criterion groups.--

In order to determine the personal and social variables differentiating children high in curiosity from children low in curiosity, it was necessary to establish criterion groups. In addition, the analysis of the data indicated that there were sufficient differences between boys and girls on many of the variables to warrant the use of separate groups by sex.

Instruments had been developed to obtain teacher judgment and peer judgment of curiosity. They are discussed in detail in an earlier publication (39). They are described very briefly below.

### Teacher judgment of curiosity.--

The teachers of the various classes participating in the study were asked to rank their pupils as to the relative amount of curiosity shown by their behavior. They ranked the child who showed the most curiosity "first" and the child who showed the least curiosity "last." They continued ranking in this manner until all children were ranked. The ranks were transformed to McCall T scores. The technique had been used by the authors in a previous study in which the retest reliability for the rankings had been found to center around .77. (48:33).

**Peer judgment of curiosity.**-- The children in each classroom were asked to write the names of classmates whose behavior most nearly resembled that of the persons described in eight paragraphs. Four of the paragraphs described the behavior of persons who would be thought of as above average in curiosity; four of persons below average. A child's score was a weighted sum of the times his name was listed. These scores were also transformed to McCall T scores. In a previous investigation, peer and teacher judgments had been found to be positively correlated, $r = .54$ (48:36).

**The measurement of intelligence.**-- In earlier studies, intelligence was controlled because it had been shown that there was a positive moderate correlation between intelligence and curiosity as defined. Since no effort was made to control intelligence in the present investigation, this variable was included in the correlation matrix.

Most of the school districts cooperating in earlier investigations used *The Lorge-Thorndike Intelligence Tests*. It, therefore, seemed appropriate to continue to use Level 3 of these tests.

*The Lorge-Thorndike Intelligence Test* - Level 3 includes a Verbal Battery and a Nonverbal Battery. Only the Verbal Battery was used. It includes four tests and is administered in approximately 34 minutes of actual working time.

In order to establish norms, over 136,000 children were tested, using 44 communities in 22 different states (40). This battery correlates between .77 and .84 with other tests purporting to measure intelligence.

*Self-rating of curiosity*.-- The child's estimate of his own curiosity was obtained by administering a self-rating scale entitled "About Myself." The scale had been developed and used by the presnt investigators in a previous study of the curiosity of school children. At that time an odd-even reliability estimate of .91 had been obtained. The correlations between self-rating and peer judgment and self-rating and teacher judgment were positive but low, .15 in the former case, .11 in the latter (48:36). Therefore, only peer judgment and teacher judgment were used in ascertaining the nature of the criterion groups. However, this scale was kept among the tests and instruments used in the present factor analysis study.

*The California Test of Personality*.-- One of the major inventories used in the present study, the *California Test of Personality* (95) is an example of those organized in terms of components based upon logical analysis, expert opinion, and statistical analysis, as opposed to those organized on the basis of factor classifications. It is one of the most thoroughly tested and convincingly validated tests of its type for children.

The *California Test of Personality* yields scores on 12 aspects of personal and social adjustment, as well as a personal adjustment score, a social adjustment score, and a total adjustment score. The 12 aspects, described in the words of the authors, are as follows:

> Self Reliance. An individual may be said to be self-reliant when his overt actions indicate that he can do things independently of others, depend upon himself in various situations, and direct his own activities. The self-reliant person is also characteristically stable emotionally, and responsible in his behavior.
>
> Sense of Personal Worth. An individual possesses a sense of being worthy when he feels he is well regarded by others, when he feels that others have faith in his future success, and when he believes that he has average or better than average ability. To feel worthy means to feel capable and reasonably attractive.
>
> Sense of Personal Freedom. An individual enjoys a sense of freedom when he is permitted to have a reasonable share in the determination of his conduct and in setting the general policies that shall govern his life. Desirable freedom includes permission to choose one's own friends and to have at least a little spending money.
>
> Feeling of Belonging. An individual feels that he belongs when he enjoys the love of his family, the well-wishes of good friends, and a cordial relationship with people in general. Such a person will as a rule get along well with his teachers or employers and usually feels proud of his school or place of business.
>
> Withdrawing Tendencies. The individual who is said to withdraw is the one who substitutes the joys of a fantasy world for actual successes in real life. Such a person is characteristically sensitive, lonely, and given to self-concern. Normal adjustment is characterized by reasonable freedom from these tendencies.
>
> Nervous Symptoms. The individual who is classified as having nervous symptoms is the one who suffers from one or more of a variety of physical symptoms such as loss of appetite, frequent eye strain, inability to sleep, or a tendency to be chronically tired. People of this kind may be exhibiting physical expressions of emotional conflicts.
>
> Social Standards. The individual who recognizes desirable social standards is the one who has come to understand the rights of others and who appreciates the necessity of subordinating certain desires to the needs of the group. Such an individual understands what is regarded as being right or wrong.

*Social Skills*. An individual may be said to be socially skillful or effective when he shows a liking for people, when he inconveniences himself to be of assistance to them, and when he is diplomatic in his dealings with both friends and strangers. The socially skillful person subordinates his or her egoistic tendencies in favor of interest in the problems and activities of his associates.

*Anti-Social Tendencies*. An individual would normally be regarded as anti-social when he is given to bullying, frequent quarreling, disobedience, and destructiveness to property. The anti-social person is the one who endeavors to get his satisfactions in ways that are damaging and unfair to others. Normal adjustment is characterized by reasonable freedom from these tendencies.

*Family Relations*. The individual who exhibits desirable family relationships is the one who feels that he is loved and well-treated at home and who has a sense of security and self-respect in connection with the various members of his family. Superior family relations also include parental control that is neither too strict nor too lenient.

*School Relations*. The student who is satisfactorily adjusted to his school is the one who feels that his teachers like him, who enjoys being with other students, and who finds the school work adapted to his level of interest and maturity. Good school relations involve the feeling on the part of the student that he counts for something in the life of the institution.

*Community Relations*. The individual who may be said to be making good adjustments in his community is the one who mingles happily with his neighbors, who takes pride in community improvements, and who is tolerant in dealing with both strangers and foreigners. Satisfactory community relations include as well the disposition to be respectful of laws and of regulations pertaining to the general welfare.

The authors report that there is "a slight tendency, possibly significant in two or three of the components, for the females' responses to average slightly higher than those of the males."

*The social distance scale*.-- A social distance scale was adapted from the instrument developed by Bogardus (5) for recording social distance. The scale was called "Other People Test" and included varying nationalities, religious groups, political groups, and employment groups. The names of the various groups were listed and the children were asked to check whether they would accept the members of each group as guests in their homes, as friends in school, as committee members, as schoolmates, or whether they would speak to them, allow them to visit the United States, or bar them from the United States. Scores were obtained by assigning decreasing numbers of points from highest to lowest acceptance, with accepting the people as guests at home receiving the highest number of points.

The Behavior Preference Record.-- Another test published by the California Test Bureau, the Behavior Preference Record (99), was administered to the children participating in this study. The Behavior Preference Record yields scores in Cooperation, Friendliness, Integrity, Leadership, Responsibility, and Critical Thinking. Only the scores in Cooperation, Friendliness, Leadership, and Responsibility were used in the factor analysis study since they were the only scores from this record that significantly differentiated high-curiosity children from low-curiosity children. The test consists of a number of paragraphs describing common childhood conflict situations, followed by a number of alternatives for the child to mark. In each case, the first set of alternatives consists of ways of reacting to the situation from among which the child must choose one as being what he would do in that particular situation. The second set of alternatives to be marked consists of reasons for behaving as he has chosen. The child must mark one or more. The author reports a sex difference for the test: "Girls tend to make median scores as much as twenty per cent higher on characteristics than do boys."

The Children's Personality Questionnaire.-- Another major inventory used in the study was the Children's Personality Questionnaire (82) for children of eight to 12, in which the personality traits measured have been identified by factor analysis. The questionnaire yields scores on 14 dimensions or "factors" of personality of which seven significantly differentiated among the children who had been previously separated into high- and low-curiosity groups. The dimensions are identified by letters of the alphabet and by technical names. The descriptions given by the authors of the subtests used in the current study are as follows:

> Factor C Ego Weakness, C-, Emotionally Unstable; Ego Strength, C+, Emotionally Mature
>
> Ego Strength is commonly regarded as a factor expressing the degree of achievement of dynamic integration and emotional control, i.e., the success of emotional learning...The C- child...tends to be easily annoyed by things and people, is more often dissatisfied with his family and his school, has difficulty in keeping quiet and restraining himself, and is discouraged by his inability to meet good standards of behavior. He shows more than average generalized neurotic responses in the form of digestive and sleep disturbances, irrational fears, obsessional behavior, and vague health failures.
>
> Factor D Placidity of Temperament, D-, Phlegmatic; Excitability, D+ Excitable
>
> This dimension...is distinguishable by the excitability's being of an immediate "temperamental" nature, by mind-wandering distractibility, by an attention-getting insecurity, and by an irrepressible, positive, assertive tone to the emotionality. The high D child reports that he is a restless sleeper, easily distracted from work by noise or intrinsic difficulty, is hurt and angry if not given important positions or whenever he is restrained or punished, and so on...the high D scoring child, though likeable and affectionate in quieter moods, is apt to be regarded as a considerable nuisance in restrictive situations.

Factor G  Super Ego Weakness, G-, Frivolous, Super Ego Strength, G+ Persevering

> This factor...is indicative of controlled rather than emotional behavior, is characterized most by energy and persistence at its positive pole...this factor best depicts the regard for moral standards, the tendency to drive the ego and to restrain the id... Subjectively, the G+ person views himself as correct in, and a guardian of, manners and morals, persevering, planful, and preferring efficient people to other companions. A number of objective tests have already been found for this factor, and seem to indicate that it involves success in a variety of performances requiring persistence, freedom from oscillation, and good organization of thinking. In ratings of children, the negative or G- pole associates itself with lying, showing off, stealing, destruction of property, and lack of control of temper.

Factor I  Harria, I-, Tough Minded; Premsia, I+, Tender Minded

> Studies of this factor at various ages have shown associations of Premsia (I+) with fastidious aversion for rough people and rough games, an interest in art, travel, and new experiences, an anxious imaginativeness, a love of dramatics and literature... Girls score at a significantly higher level than boys... The nature-nurture evidence shows that it is not hereditary, but almost wholly environmental and cultural in origin. Thus, I+, is associated with over-protected...homes...I+ children report that they avoid rough and adventurous situations, like to depend on the teacher, are artistic and neat; but they nevertheless are rated anti-social. They are rated as fastidious, interested in school, but tale-telling and demanding of attention, cautious, claiming to feel tired easily, complaining of nightmares, headaches, and stomach upsets, and given to absconding from games and physical exercise.

Factor N  Naivete, N-, Simple; Shrewdness, N+, Shrewd

> The essence of the Naivete - Shrewdness dimension is reasonably clear, though its cause is not yet to be assigned with certainty. The N+ person is a clear thinker with a trained, realistic, but sometimes expedient approach to problems; the N- person is a vague, sentimental, incontinent person, who may get along well with people in a primitive, heart-to-heart understanding, but has little self-discipline in anticipating the usual reactions of others, and is apt to be slow and awkward.

Factor $Q_3$ Weak Self-Sentiment, $Q_3$-, Lax; Strong Self-Sentiment, $Q_3$+, Self controlled

> The positively loaded response items show the child high in $Q_3$ as self-controlled, striving to accept approved ethical standards, ambitious to do well, considerate of others, foresighted, disposed to reduce and control expressions of emotion, and conscientious. Factor $Q_3$ correlates substantially with the self-sentiment, i.e., the integration of drives in the sentiment directed to maintaining an adequate self-concept. Its negative pole, $Q_3$-, is essentially an uncontrolled emotionality, excitability, and a rejection of cultural demands... Anxiety research shows that $Q_3$- is a leading influence in the second-order anxiety factor.

Factor $Q_4$ Low Ergic Tension, $Q_4$-, Composed, Relaxed; High Ergic Tension, $Q_4$+, Driven Tense

> Children and adults scoring high describe themselves as irrationally worried, tense, "driven," irritable, and in turmoil. They feel frustrated, and are aware of being criticized by parents for untidiness, phantasy, and neglect of good goals. Both actual correlations and resemblances in content confirm some association between $Q_4$ (Tension) and low Self-Sentiment ($Q_3$), Ego Weakness (C-), Guilt Proneness (O+), and Excitability (D). This association would be expected from the known grouping together of these factors (in adults) in the second-order anxiety factor.

Word Association Test (Creativity).-- The Word Association Test was designed by Getzels and Jackson (25:224-25) as a measure of creativity. The test consists of a listing of twenty-five words, each of which has more than one meaning. The examinee is asked to write as many meanings as he can think of for each word. The test appears to require flexibility of the examinee in shifting rapidly from one frame of reference to another. The score on the test is the total number of different meanings given. The authors report an internal consistency reliability coefficient of .87 for the test.

Cassel Group Level of Aspiration Test.-- The Cassel Group Level of Aspiration Test (9) was employed even though its validity as a test of level of aspiration is questionable. It had brought out significant differences between high- and low-curiosity girls.

The Cassel Group Level of Aspiration Test requires eight repetitions of the simple motor task of drawing squares around small circles as rapidly as possible. Before each trial, the examinee makes an estimate of the number of squares he will be able to complete in thirty seconds. At the end of each trial, he counts the number of squares completed and makes an estimate for the next trial. After each trial, he computes his own score which can never exceed his estimate (even if his performance exceeds his estimate) and which is reduced by two points for every point by which his estimate exceeds his performance. His score for the test is the average of his trial scores. A level of aspiration quotient is obtained by dividing the standard score obtained on the trials by the standard score of the examinee's intelligence quotient.

Peer judgment of social behavior.-- A Guess-Who device developed by Harris et al. (30) was used in the present study. The children were asked to list the names of three boys and three girls in their classes who were "best fits" for each of four aspects of responsibility: reliability, accountability, loyalty, and doing an effective job. Four untitled descriptions were given to the children:

1. This is a person upon whom you can always count; you can depend on him. When he promises that he will do something, you can always count on his doing it. You can count on his word and trust him.

2. This person is a square shooter. He doesn't try to take advantage of or cheat others. When he has done something wrong, he will own up to it rather than try to blame someone else.

3. This person thinks for the good of others rather than always for his own gain. He is loyal to the group.

4. This person is one who gets things done. On a class project, on a committee, or on a work job he gets right to work and can be counted upon to do well and promptly.

Below each paragraph, space was provided for the listing of three boys' names and three girls' names. Scores were obtained by totaling the number of times a person's name was listed.

_Institute of Child Study Security Test_.-- The _Institute of Child Study Security Test_ (28), "The Story of Jimmy," was developed by Grapko at the University of Toronto's Institute of Child Study. The author reports that the test has yielded retest reliability coefficients ranging from .76 to .95 for various groups of children. Face validity for the test is high and construct validity is reported to be most acceptable for grades four and five. The test consists of a series of paragraphs describing a day in the life of a school-age boy, Jimmy. Following each paragraph are five options of ways that Jimmy might react to the situation described in the paragraph. The options are designed to reveal independent security, mature dependent security, immature dependent security, deputy agent, and insecurity. The terms are summarized by the author as follows:

> Security is a dynamic concept implying change, growth, and integration. The ability to complete an activity and the willingness to accept one's own decisions, actions, and consequences in the performance of the activity, is called Independent Security. Thus, the child who climbs on his bicycle and succeeds in maneuvering the bicycle ahead is independently secure in this activity. The child remains independently secure as long as his performance level meets his desired level of achievement.
>
> The willingness to share in the performance of an activity combined with a willingness to mutually accept the consequences of decisions and actions is called Mature Dependent Security. The

child who chooses to make a snow man with another child (or group of children) must be willing to share in accepting whatever success or failure results from their efforts.

To wait for or expect help in completing a task or performing an activity is defined as Immature Dependent Security. The child who waits to be told what to do with his play materials, or who expects the adult to make the kite for him is immaturely dependently secure. This form of security hinges on the willingness of the adult to assume the role of dependent agent, and also on the child's faith, trust, and confidence in the efficacy of the agent.

The avoidance of consequences by means of some psychological shuffle is called a Deputy Agent. This shuffle may be to try to place the blame on someone else for one's own inadequacy, to postpone facing the consequences, to introduce an excuse, adopt a sour grapes attitude, and the like. The child who rationalizes his poor performance at reading by indicting the teacher for her inadequacy, succeeds in escaping from personal fault by means of a deputy agent.

To lack skill in dealing with an activity or significant "event" which gives rise to indecision, hesitation, and anxiety is called Insecurity. The child who cannot do his arithmetic problems and broods over his inability is insecure. To wait in despair without any plan of action is a manifestation of insecurity.

Each of the options following each paragraph is designed to represent one or other of the five security categories described above. The child taking the test is asked to rank the options one to five according to the preference "Jimmy" will show in reacting to the situation.

Two scores are obtained from the test. In the words of the author, the security score "...measures the degree to which the child's rank order of items agrees with the 'ideal' order of rank... The consistency score measures the degree of concordance or uniformity the child shows in giving the same rank to the fifteen statements or items for each of the security categories."

The author reports significant differences between boys' and girls' scores on both security and consistency. He believes that this indicates either that girls develop more quickly than boys in these traits, or that they are in general more secure than boys.

Intolerance of Ambiguity.-- Muuss (69) combined 12 items which he reports to have been known to him to be reliable into an Intolerance of Ambiguity Scale. The scale consists of 12 items such as the following:

> People who seem unsure and uncertain about things make me feel uncomfortable.
>
> Nobody can feel love and hate towards the same person.

The number of agreements is the score on intolerance of ambiguity.

Social Attitudes.-- The Social Attitudes Scale was developed by Harris et al. (30) to provide a measure of social responsibility in children. The scale consists of fifty items such as the following:

> It is no use worrying about current events or foreign affairs; I cannot do anything about them anyway.
>
> At school, it is easy to find things to do when the teacher doesn't give us enough work.

The examinee is required to respond to each item by "agree" or "disagree." The scale items were chosen according to their ability to discriminate between two groups of children of greater and lesser responsibility selected on the basis of the nominations of their classmates. Retest reliabilities ranging from .60 to .70 for various groups of children are reported. The author also reports that girls' scores tend to exceed boys' scores on the scale. He says, "In the sense of this test, girls are perhaps better socialized than boys."

*Descriptive Words (Morality)*.-- The Descriptive Words test was designed by Getzels and Jackson (25:246-47) as a test of morality. It consists of twenty sets of three adjectives, each describing one of three personal qualities: a "moral" quality, a "physical" quality, or a "social" quality. The child taking the test is asked to mark for each set the quality that he would most like to have with an "M" and the quality that he would least like to have with an "L." All qualities listed are usually considered desirable. There are separate forms for boys and girls. Where the set for boys lists: honest, strong, popular; the set for girls lists: honest, cute, popular. For each set of adjectives a score of 2, 1, or 0 is possible, depending upon whether the "moral" adjective is placed first, second, or last. A child's total score is the sum of the points he obtains on the twenty sets.

*Conceptual Systems*.-- The Situational Interpretation Experiment is a research instrument "for measuring personality variation on the concrete-abstract dimension" as originally described in Harvey, Hunt, and Schroeder, *Conceptual Systems and Personality Organization* (36). The Situational Interpretation Experiment as used in the present study is a group administered paper-and-pencil test. In taking the test, a child first completes a name sheet by writing the names of persons who meet specific descriptions. After "Person 1" and "Person 2" on the name sheet the child writes the names of friends of about his own age whom he likes and likes to do things with; after "Person 3" and "Person 4" he writes names of children he does not particularly like, with whom he does not feel comfortable. The child is then confronted with a hypothetical situation in which he receives criticism from each of the persons listed on his name sheet and is asked how he would interpret the criticism and what he would do about it.

The responses are scored as giving evidence of functioning in one of four systems varying along the concrete-abstract dimension, with system four being most abstract. Judgments are made in accordance with detailed instructions contained in the manual (36:2-11). A System I response may reflect acceptance of structural prerogatives in that the one making the criticism may be said to either "have a right" or "have no right" to his opinion and/or in that it may involve concern with a specific erroneous judgment such as "I'm wrong" or "he's wrong," which can be readily disposed of, thus restoring previous positions on an external standard. A System II response indicates concern with interference or control and/or concern with malevolence and distrust, both of which may result in retaliation. A System III response may indicate denial of the criticism: "He wouldn't say that;" "He's kidding, joking;" "He's in a bad mood;" or it may indicate that the subject sees the criticism as an attempt to affect his feelings either positively or negatively, or again it may indicate that the subject sees the criticism as reflecting some aspect of the affective relationship ("He's jealous."), or as a disruption in the relationship ("He doesn't like me.") A System IV response reflects concern with information potential ("He may have some ideas which should not be overlooked.") or concern with differing standards ("All people don't do things exactly alike.") In contrast to those of preceding systems, a System IV response may indicate that conflict may be tolerated - no action need be taken to reestablish relationships.

## The Procedures Used in the Present Study

Although the data collected for an earlier study were used in this research, they were treated differently. As indicated above, only the information obtained from tests and instruments significantly differentiating high-curiosity children from low-curiosity children was employed. Other tests and instruments had been administered previously, but the results were not utilized because they had not proven to be significant.

In the first study, groups were selected from the sample by combining the evaluations of curiosity made by teachers and peers and controlling for sex and intelligence. The same procedure was followed in the factor analysis study, except for the fact that no effort was made to control intelligence.

Members of each sex were ranked separately from high to low on the basis of a rating composed of judgments made by teachers and peers. The evaluations of each child made by all of the peers in one class had been combined into one score which was used with the ranking of the child made by the teacher.

Each sex group thus established was separated into high-curiosity and low- curiosity subgroups. These subgroups were determined by dividing each sex group at the median. In order to accomplish this division, however, some modifications were necessary. If the number of boys or girls in a given class was uneven, the child with the score falling at the median was eliminated. If there were tied scores at the median, all were eliminated. By this process, four subgroups were obtained made up as follows: 110 high-curiosity boys, 107 high-curiosity girls, 107 low-curiosity boys, and 100 low-curiosity girls.

The scores made by the members of each subgroup on the tests described above were intercorrelated. Four 38 x 38 matrices were obtained. These matrices were factor analyzed by employing the principal-factor method.

Criterion-analysis.-- The method of analysis used was derived from the hypothetico-deductive method of factor analysis described by Eysenck (17). He had previously determined that a number of tests correlated positively with neuroticism (18). He then took the table of intercorrelations between the n tests for the normal population only, and submitted it to a process of factorization, using either Burt's summation method or Thurstone's centroid method (17).

Immediately, several differences, as well as similarities, are apparent between the methods used by Eysenck and those used in the present investigation. The study is similar to Eysenck's in that a criterion of curiosity was first established and that only tests which significantly correlated with the criterion were factorized. It differs from Eysenck's method in that it hypothesizes a difference in the nature of the continuum in each sex, in that it factorizes tests independently at both ends of the curiosity continuum for each sex, and finally, the principal-factor method was used. Since this method makes it possible to account for all of the variance of the tests by extracting as many factors as there are tests, the last factors are so small as to be meaningless, especially in determining a guide for a future definition of curiosity. For this reason, an effort was made to account for only approximately 70 per cent of the communiality of each correlation matrix.

The principal-factor method.-- The Principal-factor solution has a rigorous mathematical basis. It had been explored at the beginning of the century by Karl Pearson (76), but the specific application of these mathematical principles to factor analysis were not worked out until the 1930's by Hotelling (35).

According to Harmon (29:155) "when the point representation of a set of variables is employed, the loci of uniform frequency density are essentially concentric, similar, and similarly situated ellipsoids. The axes of these ellipsoids correspond to the factors in the principal-factor solution. From an algebraic point of view, the selection of these axes is equivalent to choosing a set of factors in decreasing order of their contribution to the total communality."

Since the communalities in the diagonal cells were unknown, the matrix was factored using unities. According to Fruchter (23:104) "the resulting factors are called "principal components." The number of components extracted according to Hotelling (34) is equal to the number of tests in the battery.

The factors, or components, however, are chosen in decreasing order of their contribution to the total communality. Therefore, only the first few components are meaningful to an understanding of the variable (in this case curiosity) being analyzed. Since meaningfulness decreases rapidly when the eigenvalues are less than 1.00, only the first ten or eleven factors were considered for interpretation. As will be noted in Table 1, the first ten eigenvalues for high boys were utilized to account for 69 per cent of the communality; the first ten eigenvalues for low boys were utilized to account for 73 per cent of the communality; the first 11 eigenvalues for high girls were utilized to account for 74 per cent of the communality; and the first 11 eigenvalues for low girls were utilized to account for 65 per cent of the communality.

A few words must be said about the use of unities in the principal diagonal, since small negative values do appear in some cases as the final two eigenvalues. This result in all probability is a result of rounding error and does not represent a violation of the requirement of positive semi-definiteness (29:159). Whatever the case may be, they do not affect appreciably the factors or components reported.

The factors obtained from the correlation matrix were not rotated since answers to our questions seem to be forthcoming without such rotation. Harmon (29:187) pointed out that this procedure is quite correct in some principal-factor studies.

Before proceeding to a discussion of the results, the steps of the principal-factor analysis are listed as follows:

1. Four correlation matrices were obtained, i.e., one for each group studied.
2. Unities were used as communality estimates and placed in the cells of the principal diagonal of the matrices.
3. Eigenvalues and eigenvectors were calculated.
4. These eigenvalues and eigenvectors were ordered from high to low.

## TABLE 1

## EIGENVALUES FOR CORRELATION MATRICES OF TEST ADMINISTERED TO HIGH- AND LOW-CURIOSITY BOYS AND HIGH- AND LOW-CURIOSITY GIRLS RANKED IN ORDER FROM HIGHEST TO LOWEST

| High-Curiosity Boys | Low-Curiosity Boys | High-Curiosity Girls | Low-Curiosity Girls |
|---|---|---|---|
| 8.7328 | 12.2732 | 12.1955 | 6.5929 |
| 4.1087 | 2.9620 | 2.8918 | 3.8922 |
| 3.2148 | 2.8561 | 2.2841 | 2.8097 |
| 2.0769 | 1.8111 | 2.0867 | 2.1559 |
| 1.8314 | 1.5123 | 1.5448 | 1.7200 |
| 1.4940 | 1.4789 | 1.4724 | 1.4380 |
| 1.3685 | 1.2672 | 1.2881 | 1.3745 |
| 1.3177 | 1.2263 | 1.2358 | 1.3291 |
| 1.2139 | 1.0836 | 1.1232 | 1.2761 |
| 1.0820 | 1.0230 | 1.0949 | 1.1441 |
| .9715 | .9658 | 1.0309 | 1.043 |
| .9456 | .8483 | .8897 | .9828 |
| .8255 | .8180 | .8236 | .9217 |
| .7855 | .7534 | .7824 | .8664 |
| .7481 | .6740 | .7573 | .8085 |
| .7233 | .6389 | .7255 | .7597 |
| .6219 | .6223 | .6131 | .7154 |
| .5912 | .5198 | .5697 | .6801 |
| .5648 | .4982 | .5559 | .6639 |
| .5392 | .4550 | .5075 | .5978 |
| .5075 | .4202 | .4692 | .5411 |
| .4812 | .3948 | .3949 | .5159 |
| .4647 | .3598 | .3829 | .4883 |
| .4043 | .3205 | .3791 | .4462 |
| .3907 | .2952 | .3253 | .4300 |
| .3539 | .2778 | .2736 | .4129 |
| .3158 | .2701 | .2724 | .4063 |
| .2724 | .2370 | .2326 | .3664 |
| .2496 | .1839 | .2256 | .3473 |
| .2403 | .1685 | .1975 | .3354 |
| .1975 | .1333 | .1514 | .3214 |
| .1563 | .1191 | .1214 | .2951 |
| .1446 | .8837 | .1157 | .2749 |
| .1138 | .7267 | .0720 | .2593 |
| .0385 | .5848 | .0569 | .2296 |
| .0041 | .0820 | .0332 | .2130 |
| -.0191 | -.0634 | -.0383 | .1874 |
| -.0732 | -.0980 | -.1372 | .1577 |

5. Eigenvalues and eigenvectors larger than 1.00 were retained.
6. The percentage of the communality accounted for by eigenvalues larger than 1.00 was determined for each matrix.
7. These eigenvalues were used to reduce the dimension of the factor space.

When this point in the analysis was reached only ten or eleven of the possible 38 factors, or components, are considered meaningful. The first is a general factor; the remaining factors are of primary interest in this study and will be discussed in the next section of this report.

## Results

In order to systematically report the results of this investigation, the following steps will be taken:

1. The four correlation matrices with communality estimates (unities) will be reported. (The reporting of these complete matrices makes replication of this investigation possible either by use of the method of principal-axis or by other factorization methods.)
2. The four matrices of common factors based on the eigenvalues described above will be discussed.
3. The significance of the loadings for each of the factors in each of the reduced matrices will be determined.
4. The significant loadings of each factor will be listed for each of the curiosity groups.
5. The more highly significant factors will be discussed in terms of the original questions of this research.

## Correlation Matrices with Communality Estimates

In the Appendix, Tables A, B, C, and D show the correlation matrices with communality estimates respectively for high-curiosity boys, low-curiosity boys, high-curiosity girls, and low-curiosity girls. Little comment is necessary regarding these tables. However, it may be helpful in their interpretation if the variables described earlier are once again identified in terms of their position in the correlation matrices. These variables are as follows:

1. Intelligence
2. Self-rating of curiosity
3. Self reliance
4. Sense of personal worth
5. Sense of personal freedom
6. Feeling of belonging
7. Withdrawing tendencies
8. Nervous symptoms
9. Social standards
10. Social skills
11. Anti-social tendencies
12. Family relations
13. School relations
14. Community relations
15. Social distance
16. Cooperation
17. Friendliness
18. Leadership
19. Responsibility
20. Ego strength
21. Excitability
22. Persistence
23. Tender minded
24. Shrewdness
25. Strong Self-Sentiment
26. Tenseness
27. Creativity
28. Level of aspiration
29. Reliability
30. Accountability
31. Loyalty
32. Effectiveness
33. Security
34. Consistency
35. Intolerance of ambiguity
36. Social attitudes
37. Morality
38. Conceptual systems

## Matrices of Common Factor Coefficients

In the Appendix, Tables E, F, G, and H show the four matrices of common factor coefficients for high-curiosity boys, low-curiosity boys, high-curiosity girls, and low-curiosity girls. These were derived from the eigenvalues described above under the discussion of the principal-axis method.

Table E indicates that ten factors based on the highest ten eigenvalues account for 69 per cent of the communality in the study of high-curiosity boys. Table F indicates that ten factors based on the highest ten eigenvalues account for 73 per cent of the communality in the study of low-curiosity boys. Table G shows that 11 factors based on the highest 11 eigenvalues account for 74 per cent of the communality in the study of high-curiosity girls. Table H reveals that 11 factors based on the highest 11 eigenvalues account for 65 per cent of the communality in the study of low-curiosity girls.

## Selection of Significant Loadings from Factors

An examination of any of the reduced matrices shows clearly that some of the loadings are very small. The question then arises as to their significance in describing a factor. Stated differently, it might be pertinent to ask what loadings can be eliminated and still adequately and parsimoniously describe a factor.

In order to determine the significance of a loading, the following procedure was used:

1. The means were calculated for all of the correlation coefficients in each of the correlation matrices.

2. The standard error of a factor coefficient was obtained from a table using these means and the N's of each sample.
3. The standard error of a factor coefficient was multiplied by 2.58 and 1.96 to obtain factor coefficients significant at the .01 and .05 levels, respectively.
4. Coefficients in the matrices of common factor coefficients at the .05 level of significance or better were kept for interpretation, but emphasis was placed on coefficients at the .01 level or better.

The coefficients included from each matrix of common factor coefficients differed for each group in the study. Table 2 shows these cut-off coefficients for each group at both the .01 and the .05 levels.

TABLE 2

MEAN CORRELATION COEFFICIENTS, STANDARD ERROR
OF FACTOR COEFFICIENTS AND SIGNIFICANT
COEFFICIENTS AT .05 AND .01 LEVELS
FOR DETERMINING WHICH VARIABLES
TO INCLUDE IN INTERPRETATION
OF FACTORS FOR EACH GROUP

| Group | Mean Correlation | Standard Error | Significance Level .05 | .01 |
|---|---|---|---|---|
| High-curiosity boys | .161 | .163 | .319 | .421 |
| Low-curiosity boys | .290 | .128 | .251 | .330 |
| High-curiosity girls | .270 | .136 | .267 | .351 |
| Low-curiosity girls | .125 | .221 | .433 | .570 |

## Significant Loadings of Factors for Each Curiosity Group

After the levels of significance of the coefficients in the four matrices of common factor coefficients were determined, the coefficients meeting the .05 level of significance were segregated for study. Although coefficients whose significance level lay between .05 and .01 were studied, interpretations were based on loadings significant at the .01 level or less, where it was possible to do so. However, this more rigorous standard could not be employed in all groups and in all factors within groups. Where the addition of loadings significant between the .05 and .01 levels added to the understanding of the factor, they were utilized.

In the lists of factors that follow, loadings where the significance is between the .05 and .01 levels are indicated by parentheses. All other loadings are significant at the .01 level or less.

### High-curiosity Boys

### Factor I

| | | |
|---|---|---|
| 1 | Intelligence | .498 |
| 3 | Self-reliance | .511 |
| 4 | Sense of personal worth | .510 |
| 5 | Sense of personal freedom | (.387) |
| 6 | Feeling of belonging | .644 |
| 7 | Withdrawing tendencies | .568 |
| 8 | Nervous symptoms | .504 |
| 9 | Social standards | .480 |
| 10 | Social skills | .607 |
| 11 | Anti-social tendencies | .738 |
| 12 | Family relations | .557 |
| 13 | School relations | .705 |
| 14 | Community relations | .457 |
| 16 | Cooperation | .487 |
| 17 | Friendliness | .531 |
| 19 | Responsibility | .459 |
| 21 | Excitability | -.537 |
| 22 | Persistence | .445 |
| 24 | Shrewdness | -.482 |
| 25 | Strong self-sentiment | (.404) |
| 26 | Tenseness | -.556 |
| 27 | Creativity | .425 |

**Factor I (Continued)**

| | | |
|---|---|---|
| 29 | Level of aspiration | .429 |
| 30 | Accountability | (.358) |
| 31 | Loyalty | .495 |
| 32 | Effectiveness | .456 |
| 33 | Security | .574 |
| 34 | Consistency | .554 |
| 35 | Intolerance of ambiguity | -.574 |
| 36 | Social attitudes | .740 |

**Factor II**

| | | |
|---|---|---|
| 9 | Social standards | (.334) |
| 15 | Social distance | (.407) |
| 16 | Cooperation | .525 |
| 17 | Friendliness | .587 |
| 19 | Responsibility | .459 |
| 23 | Tender minded | .579 |
| 29 | Level of aspiration | -.708 |
| 30 | Accountability | -.630 |
| 31 | Loyalty | -.711 |
| 32 | Effectiveness | -.696 |

**Factor III**

| | | |
|---|---|---|
| 3 | Self-reliance | (-.333) |
| 5 | Sense of personal worth | (-.329) |
| 7 | Withdrawing tendencies | -.488 |
| 8 | Nervous symptoms | (-.419) |
| 11 | Anti-social tendencies | (-.330) |
| 12 | Family relations | (-.349) |
| 15 | Social distance | (.359) |
| 16 | Cooperation | (.340) |
| 19 | Responsibility | (.402) |
| 27 | Creativity | .443 |
| 29 | Reliability | .461 |
| 30 | Accountability | .449 |
| 31 | Loyalty | .441 |
| 32 | Effectiveness | .514 |

**Factor IV**

| | | |
|---|---|---|
| 1 | Intelligence | (.406) |
| 9 | Social standards | (-.374) |
| 21 | Excitability | (.377) |
| 25 | Strong self-sentiment | (-.336) |
| 27 | Creativity | .459 |
| 28 | Level of aspiration | -.549 |
| 34 | Consistency | (.325) |

### Factor V

| | | |
|---|---|---|
| 1 | Intelligence | (-.324) |
| 14 | Community relations | (-.359) |
| 22 | Persistence | .422 |
| 25 | Strong self-sentiment | (.353) |
| 26 | Tenseness | -.421 |
| 33 | Security | .435 |
| 34 | Consistency | .452 |

### Factor VI

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | .483 |
| 10 | Social skills | (.333) |
| 20 | Ego strength | .541 |
| 35 | Intolerance of ambiguity | .441 |
| 37 | Morality | (-.353) |

### Factor VII

| | | |
|---|---|---|
| 18 | Leadership | .627 |
| 38 | Conceptual systems | -.646 |

### Factor VIII

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | (.365) |
| 22 | Persistence | (-.419) |
| 28 | Level of aspiration | .477 |
| 38 | Conceptual systems | .497 |

### Factor IX

| | | |
|---|---|---|
| 5 | Sense of personal freedom | (-.376) |
| 14 | Community relations | (.398) |
| 16 | Cooperation | (-.321) |
| 37 | Morality | .532 |

### Factor X

| | | |
|---|---|---|
| 25 | Strong self-sentiment | (.376) |
| 33 | Security | (-.391) |
| 34 | Consistency | (-.378) |

## Low-curiosity Boys

### Factor I

| | | |
|---|---|---|
| 1 | Intelligence | .540 |
| 3 | Self-reliance | .531 |
| 4 | Sense of personal worth | .754 |
| 5 | Sense of personal freedom | .627 |
| 6 | Feeling of belonging | .906 |
| 7 | Withdrawing tendencies | .673 |
| 8 | Nervous symptoms | .544 |
| 9 | Social standards | .737 |
| 10 | Social skills | .815 |
| 11 | Anti-social tendencies | .836 |

### Factor I (Continued)

| | | | | | |
|---|---|---|---|---|---|
| 12 | Family relations | .651 | 25 | Strong self-sentiment | .507 |
| 13 | School relations | .857 | 26 | Tenseness | -.616 |
| 14 | Community relations | .763 | 27 | Creativity | -.472 |
| 15 | Social distance | (.302) | 28 | Level of aspiration | (-.253) |
| 16 | Cooperation | .654 | 29 | Reliability | .340 |
| 17 | Friendliness | .517 | 30 | Accountability | .362 |
| 18 | Leadership | (.253) | 31 | Loyalty | .477 |
| 19 | Responsibility | .762 | 32 | Effectiveness | .469 |
| 20 | Ego strength | (.297) | 33 | Security | .561 |
| 21 | Excitability | -.631 | 34 | Consistency | .546 |
| 22 | Persistence | .557 | 35 | Intolerance of ambiguity | -.564 |
| 23 | Tender minded | (.290) | 36 | Social attitudes | .847 |
| 24 | Shrewdness | -.589 | | | |

### Factor II

| | | | | | |
|---|---|---|---|---|---|
| 1 | Intelligence | -.336 | 23 | Tender minded | (-.303) |
| 5 | Sense of personal worth | .332 | 26 | Tenseness | (-.323) |
| 6 | Feeling of belonging | (.255) | 27 | Creativity | -.370 |
| 7 | Withdrawing tendencies | .397 | 28 | Level of aspiration | (.276) |
| 8 | Nervous symptoms | .419 | 29 | Reliability | -.536 |
| 11 | Anti-social tendencies | .359 | 30 | Accountability | -.586 |
| 15 | Social distance | (-.297) | 31 | Loyalty | -.520 |
| 22 | Persistence | (.289) | 32 | Effectiveness | -.557 |

### Factor III

| | | |
|---|---|---|
| 1 | Intelligence | -.356 |
| 5 | Sense of personal freedom | (.282) |
| 16 | Cooperation | -.470 |
| 17 | Friendliness | -.523 |
| 18 | Leadership | -.372 |
| 19 | Responsibility | -.498 |
| 27 | Creativity | (-.320) |
| 28 | Level of aspiration | .490 |
| 29 | Reliability | .541 |
| 30 | Accountability | .503 |
| 31 | Loyalty | .522 |
| 32 | Effectiveness | .432 |

### Factor IV

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | .353 |
| 8 | Nervous symptoms | .368 |
| 15 | Social distance | (.295) |
| 17 | Friendliness | -.342 |
| 18 | Leadership | (-.274) |
| 19 | Responsibility | (-.264) |
| 22 | Persistence | (-.268) |
| 23 | Tender minded | (-.320 |
| 27 | Creativity | (.290) |
| 33 | Security | .467 |
| 34 | Consistency | .490 |
| 35 | Intolerance of ambiguity | (-.284) |
| 38 | Conceptual Systems | (.298) |

### Factor V

| | | |
|---|---|---|
| 3 | Self-reliance | -.401 |
| 24 | Shrewdness | (-.299) |
| 26 | Tenseness | (-.314) |
| 27 | Creativity | (-.294) |
| 28 | Level of aspiration | .343 |
| 33 | Security | .472 |
| 34 | Consistency | .475 |

### Factor VI

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | -.561 |
| 16 | Cooperation | (-.260) |
| 17 | Friendliness | -.390 |
| 24 | Shrewdness | (-.269) |
| 25 | Strong self-sentiment | .545 |
| 28 | Level of aspiration | (-.254) |
| 38 | Conceptual system | (.252) |

### Factor VII

| | | |
|---|---|---|
| 3 | Self-reliance | (-.277) |
| 15 | Social distance | -.427 |
| 20 | Ego strength | -.428 |
| 23 | Tender minded | -.382 |
| 28 | Level of aspiration | -.330 |
| 37 | Morality | (.314) |
| 38 | Conceptual systems | -.333 |

### Factor VIII

| | | |
|---|---|---|
| 18 | Leadership | .356 |
| 20 | Ego strength | .386 |
| 23 | Tender minded | (-.302) |
| 37 | Morality | -.669 |

### Factor IX

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | -.379 |
| 27 | Creativity | (.251) |
| 37 | Morality | (-.260) |
| 38 | Conceptual systems | -.559 |

### Factor X

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | (.275) |
| 5 | Sense of personal freedom | -.346 |
| 14 | Community relations | (.268) |
| 21 | Excitability | (.273) |
| 38 | Conceptual systems | -.386 |

## High-curiosity Girls

### Factor I

| | | |
|---|---|---|
| 1 | Intelligence | .701 |
| 3 | Self-reliance | .532 |
| 4 | Sense of personal worth | .875 |
| 5 | Sense of personal freedom | .597 |
| 6 | Feeling of belonging | .703 |
| 7 | Withdrawing tendencies | .673 |
| 8 | Nervous symptoms | .568 |
| 9 | Social standards | .542 |
| 10 | Social skills | .541 |
| 11 | Anti-social tendencies | .676 |
| 12 | Family relations | .604 |
| 13 | School relations | .800 |
| 14 | Community relations | .572 |
| 15 | Social distance | .386 |
| 16 | Cooperation | .391 |
| 17 | Friendliness | .541 |
| 19 | Responsibility | .541 |
| 20 | Ego strength | (.339) |

| | Factor I (Continued) | |
|---|---|---|
| 21 | Excitability | -.461 |
| 22 | Persistence | .509 |
| 23 | Tender minded | .363 |
| 24 | Shrewdness | -.430 |
| 25 | Strong self-sentiment | .445 |
| 26 | Tenseness | -.510 |
| 27 | Creativity | .562 |
| 29 | Reliability | .755 |
| 30 | Accountability | .624 |
| 31 | Loyalty | .698 |
| 32 | Effectiveness | .742 |
| 33 | Security | .629 |
| 34 | Consistency | .582 |
| 35 | Intolerance of ambiguity | -.745 |
| 36 | Social attitudes | .795 |

| | Factor II | |
|---|---|---|
| 1 | Intelligence | .409 |
| 3 | Self-reliance | (-.302) |
| 5 | Sense of personal worth | (-.313) |
| 6 | Feeling of belonging | (-.325) |
| 7 | Withdrawing tendencies | (-.315) |
| 8 | Nervous symptoms | (-.284) |
| 10 | Social skills | -.462 |
| 12 | Family relations | (-.307) |
| 13 | School relations | (-.331) |
| 14 | Community relations | (-.319) |
| 18 | Leadership | .352 |
| 19 | Responsibility | (.303) |
| 22 | Persistence | -.449 |
| 26 | Tenseness | (.309) |
| 27 | Creativity | (.330) |
| 33 | Security | .448 |
| 34 | Consistency | .372 |
| 37 | Morality | (.279) |

| | Factor III | |
|---|---|---|
| 8 | Nervous symptoms | .487 |
| 10 | Social skills | (-.289) |
| 16 | Cooperation | -.587 |
| 17 | Friendliness | -.568 |
| 19 | Responsibility | -.531 |

| | Factor IV | |
|---|---|---|
| 20 | Ego strength | (-.274) |
| 29 | Reliability | .574 |
| 30 | Accountability | .541 |
| 31 | Loyalty | .512 |
| 32 | Effectiveness | .504 |

### Factor III (Continued)

| | | |
|---|---|---|
| 23 | Tender minded | (-.272) |
| 25 | Strong self-sentiment | -.369 |
| 33 | Security | .360 |
| 34 | Consistency | .478 |

### Factor IV (Continued)

| | | |
|---|---|---|
| 33 | Security | (-.334) |
| 34 | Consistency | (-.348) |
| 35 | Intolerance of ambiguity | (.300) |
| 38 | Conceptual systems | (-.282) |

### Factor V

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | -.392 |
| 15 | Social distance | -.508 |
| 27 | Creativity | -.378 |
| 28 | Level of aspiration | .658 |

### Factor VI

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | .433 |
| 11 | Anti-social tendencies | (-.291) |
| 20 | Ego strength | (-.324) |
| 21 | Excitability | (-.269) |
| 22 | Persistence | (.273) |
| 23 | Tender minded | (-.303) |
| 24 | Shrewdness | (-.301) |
| 28 | Level of aspiration | (.309) |
| 36 | Social attitudes | (.302) |
| 37 | Morality | (.326) |

### Factor VII

| | | |
|---|---|---|
| 2 | Self-rating of curiosity | .374 |
| 3 | Self-reliance | .439 |
| 9 | Social standards | (-.281) |
| 24 | Shrewdness | .450 |
| 37 | Morality | (-.290) |
| 38 | Conceptual systems | -.470 |

### Factor VIII

| | | |
|---|---|---|
| 9 | Social standards | .356 |
| 18 | Leadership | .649 |
| 37 | Morality | -.441 |

### Factor IX

| | | |
|---|---|---|
| 5 | Sense of personal freedom | (-.274) |
| 12 | Family relations | (-.269) |
| 18 | Leadership | .381 |
| 25 | Strong self-sentiment | .559 |

### Factor X

| | | |
|---|---|---|
| 14 | Community relations | (-.341) |
| 20 | Ego strength | -.404 |
| 22 | Persistence | .358 |
| 24 | Shrewdness | (.293) |
| 37 | Morality | (-.302) |
| 38 | Conceptual systems | (.345) |

### Factor XI

| | | |
|---|---|---|
| 12 | Family relations | (-.345) |
| 38 | Conceptual systems | .503 |

## Low-curiosity Girls

### Factor I

| | | |
|---|---|---|
| 3 | Self-reliance | (.514) |
| 4 | Sense of personal worth | .713 |
| 5 | Sense of personal freedom | .583 |
| 6 | Feeling of belonging | .577 |
| 7 | Withdrawing tendencies | (.549) |
| 8 | Nervous symptoms | (.555) |
| 11 | Anti-social tendencies | .617 |
| 12 | Family relations | .631 |
| 13 | School relations | .737 |
| 22 | Persistence | (.518) |
| 24 | Shrewdness | (-.434) |
| 25 | Strong self-sentiment | (.560) |
| 26 | Tenseness | (-.527) |
| 35 | Intolerance of ambiguity | (-.483) |
| 36 | Social attitudes | (.500) |

### Factor II

| | | |
|---|---|---|
| 1 | Intelligence | (.459) |
| 2 | Self-rating of curiosity | (.499) |
| 23 | Tender minded | -.671 |
| 27 | Creativity | (.525) |
| 29 | Reliability | .651 |
| 30 | Accountability | .610 |
| 31 | Loyalty | (.529) |
| 32 | Effectiveness | .713 |

| | Factor III | |
|---|---|---|
| 7 | Withdrawing tendencies | (-.405) |
| 16 | Cooperation | (.524) |
| 17 | Friendliness | .652 |
| 19 | Responsibility | .581 |

| | Factor IV | |
|---|---|---|
| 1 | Intelligence | (-.523) |
| 28 | Level of aspiration | .556 |

| | Factor V | |
|---|---|---|
| 33 | Security | .721 |
| 34 | Consistency | .750 |

| | Factor VI | |
|---|---|---|
| 21 | Excitability | (.445) |
| 28 | Level of aspiration | (-.462) |
| 37 | Morality | (-.449) |

| | Factor VII | |
|---|---|---|
| 18 | Leadership | (.454) |
| 20 | Ego strength | (-.434) |

| | Factor VIII | |
|---|---|---|
| 24 | Shrewdness | (-.475) |

| | Factor IX | |
|---|---|---|
| 18 | Leadership | (-.435) |

| | Factor X | |
|---|---|---|
| 37 | Morality | (.452) |

| | Factor XI | |
|---|---|---|
| 9 | Social standards | (.496) |

## Interpretation of Factors

In this section of the report, each factor extracted from the analysis for each curiosity group will be described in such a way that the reader may look upon this investigation as being, in reality, four separate factor analysis studies. The groups will be ordered in the same manner as above, i.e. high-curiosity boys, low-curiosity boys, high-curiosity girls, and low-curiosity girls. Emphasis will be placed on loadings significant at the .01 level or less where possible. Each factor will be identified with a number corresponding to those used above. The number will be followed with letters to signify from which analysis the factor was extracted. For example, HB will be used for high-curiosity boys, LB for low-curiosity boys, HG for high-curiosity girls, and LG for low-curiosity girls. Thus, Factor III for low curiosity girls is labelled IIILG. Where possible, the factors have also been named.

## High-curiosity Boys

### Factor IIHB; Self-actualization

Boys who are high in Factor IIHB have an attitude of "right doing" toward others, and are sympathetic and tactful. At the same time, they may show a fastidious aversion for rough people and rough games. They have an interest in art, travel, new experiences, and show an anxious imaginativeness and a love of dramatics and literature. These boys are adaptive, conformative and helpful in dealing with others. They are dependable, efficient, prompt, self-reliant, controlling of own behavior, patient, and persevering. They are tolerant of others from whom they may differ. Although they appreciate the necessity of subordinating their rights to the needs of the group, they often avoid games and physical exercise. Their behavior is often misunderstood by their peers who tend to rate them anti-social and as being negative in areas where they should be strong, i.e. accountability, effectiveness, and group loyalty. Factor IIHB boys, themselves frequently are not realistic in estimating their own ability.

Factor IIIHB; Restrained creativity

Boys high in Factor IIIHB possess some of the same characteristics as found in Factor IIHB, but to a less significant degree. This factor, too, is loaded positively for dependability, efficiency, promptness, self-reliance, patience, perseverance, and the ability to control one's own behavior. The boy is also adaptive, conformative, and helpful in dealing with others. He is also accepting of those from whom he differs. However, high Factor IIIHB indicates a boy who lacks some of the certainty revealed by a boy high on Factor IIHB. He tends to question his own capabilities and is not quite as independent as he would like to be. He may show emotional conflicts and feel insecure with his family. His uncertainty may be exhibited in disobedience. His peers rate him high in group behavior. They consider him to be effective, reliable, accountable, and loyal. He is creative, and in spite of the recognition by his peers of his social contribution, he is sensitive and lonely.

Factor IVHB; Impulsive creativity

Although this factor is highly loaded with creativity, it differs from Factor IIIHB in that it also includes excitability of an immediate temperamental nature, a mind wandering distractibility, an attention-getting insecurity, and an assertative tone to the emotionality. Such emotionality may be uncontrolled and lead to a rejection of cultural demands giving the impression of an unawareness of social standards.

The boy high on this factor is intelligent and is consistent in his thinking, but is unrealistic about his own abilities.

### Factor VHB; Persistence

This factor is distinguished by a persistent energized drive free from oscillation. Boys high on Factor VHB are consistent in their thinking and are secure and composed with low ergic tension. They are ambitious, conscientious and have adequate self-concepts. They prefer efficient people to others; this preference may be reflected in their relatively poor community relationships. Factor VHB is negatively loaded with intelligence.

### Factor VIHB; Emotional maturity

Factor VIHB is the dimension of emotional maturity and appears to be related to the boys' ideas of their own behavior that can be described as showing curiosity. Boys high on this factor have achieved emotional control. We should, perhaps, see their curiosity and exploratory behavior as a seeking for certainty. Apparently, their desire for certainty prohibits them from seeing "gray" areas which, in turn, is reflected in high intolerance of ambiguity.

Boys high in Factor VIHB would rather be accepted for physical and social qualities than for moral qualities.

### Factor VIIHB; Leadership

Factor VIIHB has only two significant loadings. The dimension may be described as "ward leadership." It is a leadership based upon a concrete conceptualization system which "keeps the boy close to his peers." In some ways this factor seems similar to Factor IIIHB where being "down-to-earth" and closer to one's colleagues tends to make them see one positively in a social sense.

### Factor VIIIHB; Abstraction

Boys high in Factor VIIIHB are curious about abstract matters and probably see their own curiosity as seeking answers which are more abstract than concrete. They are realistic in level of aspiration, but seem to lack persistence in following through.

### Factor IXHB; Morality

Boys rating high in this factor prefer the quality of morality to physical and social qualities. They tend to be respectful of laws and regulations to the degree that they may show lack of cooperation with their peers. The superego in the form of parents and parent surrogates may be so involved in this development that the boy shows a feeling of being deprived of his own personal freedom.

### Factor XHB; (meaning is ambiguous)

Factor XHB might have something to do with self-sentiment because the boy high in Factor XHB is self-controlled, ethical, ambitious, considerate, conscientious, foresighted, and disposed to reduce and control expressions of emotion. This factor is also loaded with insecurity and inconsistency. Since none of the loadings on this factor were significant at the .01 level, it will go unnamed at this time.

## Low-curiosity Boys

### Factor IIILB; Restrained creativity

Factor IIILB shows negative loadings for both intelligence and creativity. Boys high on this factor do not show nervous symptoms nor are they apt to substitute the joys of a phantasy world for reality.

They have a positive sense of personal worth and are free from bullying, quarreling, disobedience, and destructive acts toward the property of others. Less significant loadings support the interpretation of the more significant loadings. Low creativity and low intelligence and the apparently good adjustment of these boys seem to be related in such a way as to make their peers rate them as lacking in loyalty, reliability, accountability, and group effectiveness.

Factor IIILB; Self-actualization

Factor IIILB has significant negative loadings for such behavior as adaptations, conformity, and helpfulness toward others, for such attitudes as "right-doing" toward others and for such responses as dependability, efficiency, promptness, self-reliance, patience, and perseverance. Also negatively loaded are control of own behavior and leadership of others. Factor IIILB is loaded negatively for intelligence and creativity. The latter, however, are not significant at the .01 level. Peers' ratings of reliability, accountability, group loyalty, and group effectiveness are loaded positively. Perhaps, the realistic evaluation of these boys of their own ability may have some bearing on the high ratings by peers.

Factor IVLB; Consistency

Boys who are high in Factor IVLB are consistent in their thinking and feel secure. They show few nervous symptoms, rate themselves high in curiosity, and show signs of creativity. They conceptualize more abstractly than concretely and are accepting of others in an abstract manner, while remaining quite unfriendly in face-to-face relationships. Their security and consistency is so strong that they do not reach out into leadership roles where they must take responsibility. Although they can tolerate ambiguity to some degree, they are unimaginative, and lack interest in art, travel, and new experiences.

### Factor VLB; Self-directedness

Although low-curiosity boys tend to show a high level of security and consistency if they are high in this factor, they also must be highly other-directed because they are low in self-reliance having a realistic and, probably, a low value of their own ability. They tend to be tense, irrationally worried, often naive, and lacking in creativity.

### Factor VILB; Self-control

Factor VILB is loaded highly and positively with strong self-sentiment and highly and negatively in evaluation of one's own level of curiosity. Since strong self-sentiment involves among other behavioral patterns an effort to accept approved ethical standards and ambitions to do well, and since behavior considered to be manifestations of curiosity are often at odds with accepted behavior, the loadings are not inconsistent as they may seem to be at first glance. The striving for ethical perfection which is characteristic of boys high on this factor may cause them to show signs of unfriendliness, since they tend to be somewhat unrealistic and naive. They do not cooperate well with others and seem to conceptualize more in the abstract than in the concrete mode.

### Factor VIILB; Self-reliance

Factor VIILB is loaded positively for conceptualization and morality indicating that boys high in this factor tend to conceptualize abstractly and to prefer moral to physical and social qualities. This may, in part, be a cover for their discouragement at their inability to meet good standards of behavior. The high Factor VIILB boy is easily annoyed by people and things and is not accepting of others, although he must depend on them to do many things because he tends to be low in self-reliance. He tends to be unrealistic in judging his own ability which, in turn, may bring on frustrations which lower ego strength. He lacks interest in art, travel, dramatics, and literature. He is lacking in imagination and does not care especially for new experiences.

### Factor VIIILB; Leadership

Factor VIIILB shows positive loadings for leadership and ego strength. Boys high on this factor show interest in physical and social qualities and a high degree of dynamic integration and emotional control. They are not too imaginative but probably gain their leadership by participating actively in games.

### Factor IXLB; Concrete creativity

The only positive loading of this factor is creativity which is significant at the .05 level but not at the .01 level. The negative loadings for morality and conceptual systems indicates a concrete moment-to-moment creativity as opposed to an abstract "theory-like" creativity. The boy does not recognize his creativity and is unaware of his own curiosity about things and about himself.

### Factor XLB; Abstraction

The only loadings on Factor XLB significant at the .01 level or less are negative. The negative loading for conceptual systems indicates that boys high in Factor XLB conceptualize in the concrete rather than the abstract and they tend to function in terms of immediacy and in a temperamental manner. Boys high in XLB feel restricted in terms of their own choices of behavior and feel hurt and angry if not given important positions in their community. They tend to feel they have good community relations with their neighbors. Although they feel a sense of restriction and although they conceptualize concretely, they tend to consider themselves to be quite curious.

## High-curiosity Girls

### Factor IIHG; Leadership

Girls high in this factor show intellectual leadership, a sense of security, and consistency in thinking. However, the leadership is probably "maternalistic." These girls do not subordinate their own egoistic tendencies in favor of interests and activities of their associates.

### Factor IIIHG; Enculturation

High-curiosity girls high in Factor IIIHG are, for the most part, secure and consistent in their behavior and relatively free of nervous symptoms. At the same time, there is a tendency for them to become excited and to reject cultural demands even to the extent of exhibiting a limitation of social skills. This latter behavior may cause their peers to see them as uncooperative in group activities, irresponsible, and unfriendly.

### Factor IVHG; Security

The negative loadings on this factor found for high-curiosity girls are significant at the .05 level and indicate low level anxiety or an awareness that "everything is not right with the world." Girls who score at the anxious end of this continuum are rated high in reliability, accountability, loyalty, and group effectiveness by their peers.

Factor VHG; Prejudice

High-curiosity girls high in Factor VHG have a highly realistic opinion of their own potentialities which probably gives them a feeling of not needing others. They show considerable prejudice toward those who differ from themselves in race, color, attitudes, and place of origin. This lack of reaching out for other people is reflected in an insensitivity for things in the environment and a lack of realization of their own curiosity.

Factor VIHG; Adjustment

There was only one loading on Factor VIHG significant at the .01 level or better. Other loadings significant at the .05 level were exactly opposite in sign to the significant loadings on the same factor for low-curiosity girls. High-curiosity girls who are on the positive end of the continuum are not easily distracted, have a realistic view of their own ability, can judge their own curiosity, and tend to seek moral rather than physical and social qualities.

Factor VIIHG; Shrewdness

The girl high in this factor is a clear thinker with a realistic but sometimes expedient approach to problems. She is apt to conceptualize in terms of obvious structure or the concrete rather than to generalize in abstract terms. She is self-reliant and can do most things for herself. She may not appreciate the necessity of subordinating certain desires to the needs of others.

Factor VIIIHG; Companionship

Girls high in Factor VIIIHG are in contrast with those high in Factor IIHG in that the rights of others are considered in the leadership qualities shown. A high interest is exhibited in the qualities others desire such as a love of physical and social activities. Therefore, girls high in this factor are more "down to earth" than girls high in Factor IIHG.

Factor IXHG; Self-control

The highest positive loading on Factor IXHG is strong self-sentiment. Girls high in this factor show leadership in a self-controlled manner. They strive to accept the approved ethical standards, are ambitious and try to control emotions. In attempting to accomplish these standards, they may feel restricted by social demands and by their families. This is occasionally reflected in negative family relationships.

Factor XHG; Persistence

A girl with high Factor XHG is persistent and may achieve well in intellectual work. Her ego strength is low indicating lack of emotional control. She tends to obtain homeostasis by seeking acceptable physical and social qualities rather than moral and by conceptualizing in broad general rubrics rather than in narrow, specific categories. Her lack of ego strength causes her to be easily annoyed and dissatisfied which, in turn, leads to poor community relations.

Factor XIHG; Conceptualization.

The single significant positive loading for Factor XIHG in high-curiosity girls indicates that those high in this factor conceptualize abstractly more than concretely. The only other significant loading indicates a tendency toward poor family relations. The lack of other significant loadings makes further interpretations impossible.

## Low-curiosity Girls

### Factor IILG; Participation

Factor IILG is high in what Cattell calls tough mindedness. A girl possessing a high level of IILG participates with the majority of her peers in games and physical activities. They, in turn, rate her high in group activities and consider her to be reliable, accountable, and effective. She lacks an interest in art, travel, and new experiences and does not appreciate literature and dramatics.

### Factor IIILG; Enculturation

Girls high in Factor IIILG show emotional problems by withdrawing from threatening activities and by substituting phantasy for realistic achievement. They probably accept cultural demands and, therefore, are rated by their peers as being cooperative, friendly, and responsible. The loadings on this factor for low-curiosity girls are opposite in sign to the loadings for Factor IIIHG for high-curiosity girls.

### Factor IVLG; Judgment

Factor IVLG had only one loading significant at the .01 level and one significant between the .05 and .01 levels. No clear statement can be made about this factor. Apparently, girls high in this factor are low in intelligence but can make realistic judgments regarding their own abilities.

### Factor VLG; Security

Factor VLG accounts for a small amount of the communality. In the present analysis, the only significant loadings are for security and consistency. Both of these loadings are very high.

### Factor VILG; Adjustment

Low-curiosity girls possessing Factor VILG show the negative characteristics of VIHG. They are easily distracted, lack reality in judging own ability, and seek physical and social qualities rather than moral. They tend to function on a "the-spur-of-the-moment" basis.

### Factor VIILG; (unnamed)

The evidence for this factor is not clear. There are only two loadings, both significant between the .05 and the .01 levels. They logically seem to conflict with each other. Therefore, no effort was made to name or describe this factor.

### Factor VIIILG; Shrewdness

The analysis for low-curiosity girls revealed only one loading significant at the .05 level on the factor called "Shrewdness." The sign of this factor coefficient is opposite to the sign for the coefficient for the same variable in Factor VIIHG (Shrewdness) for high-curiosity girls. This negative loading may indicate that girls high on this factor are vague, sentimental people who may get along well with people in a primitive heart-to-heart understanding, but have little skill in anticipating the usual reactions of others, and are apt to be slow and awkward (82).

### Factor IXLG; Leadership

Factor IXLG identified in the study of low-curiosity girls has only one significant loading. This negative loading on leadership might indicate that this factor is at the extreme negative end of either Factor IIHG, Factor VIIIHG, or Factor IXHG identified in the study of high-curiosity girls. However, the data are not clear.

### Factor XLG; (unnamed)

Only one loading, morality, significant at the .05 level was identified. Its meaning is not clear. Therefore, no effort was made to name this factor.

### Factor XILG; (unnamed)

Only one loading, social standards, significant at the .05 level was identified. Its meaning is not clear. Therefore, no effort was made to name this factor.

## Conclusions and Interpretations

Summary of results.-- A summary of the results indicates that there are several factors in common among the four curiosity groups. The review also reveals that there are factors specific to a single group. The following list shows some of these relationships: (A plus sign indicates that this factor is high for the group, a minus sign means the opposite is true. An X is used to show that no factor of this name was identified for the particular group.)

| High-curiosity Boys | | Low-curiosity Boys | | High-curiosity Girls | | Low-curiosity Girls | |
|---|---|---|---|---|---|---|---|
| Self-actualization | + | Self-actualization | - | Adjustment | + | Adjustment | - |
| Restrained Creativity | + | Restrained Creativity | - | X | | X | |
| Impulsive Creativity | + | Concrete Creativity | + | X | | X | |
| Emotional Maturity | + | Self-directedness | - | X | | X | |
| X | | Self-reliance | - | X | | X | |
| Abstraction | + | Abstraction | - | X | | X | |
| Leadership | + | Leadership | + | Leadership | + | Leadership | - |
| X | | Consistency | + | Security | - | Security | + |
| Morality | + | X | | X | | X | |
| X | | Self-control | + | Self-control | + | X | |
| X | | X | | Prejudice | + | Social Participation | + |
| X | | X | | Shrewdness | + | Shrewdness | - |
| Persistence | + | X | | Persistence | + | X | |
| X | | X | | X | | Judgment | + |
| X | | X | | Enculturation | - | Enculturation | + |
| X | | X | | Companionship | + | X | |
| X | | X | | Conceptualization | + | X | |

From this list, it is clear that some of the questions raised at the beginning of this investigation are answered as follows:

1. There are personal and/or social factors that differentiate high-curiosity boys from low-curiosity boys.
2. There are personal and/or social factors that differentiate high-curiosity girls from low-curiosity girls.
3. There are personal and/or social factors that distinguish among boys and girls who also differ in their curiosity levels.
4. Finally, these factors may be used to formulate a description of children differing in curiosity. This description may be utilized to define or identify groups of children with a high probability of being different from each other in curiosity level.

A definition of curiosity.-- It is possible to describe high-curiosity boys as boys who are self-actualized, creative--both in terms of finding unique immediate solutions and in seeking long range, well-considered answers to problems, emotionally mature, capable of abstract thinking and considerable leadership, while being persistent and desirous of having ideal or moral qualities.

On the other hand, low-curiosity boys are less self-actualized, limited in creativity, lacking in self-reliance and self-direction, unable to do abstract thinking, but are able to show leadership on a concrete, face-to-face basis, while tending to exhibit considerable consistency, security, and self-control.

The data obtained for girls are not as complete as those for boys. Therefore, the definition of curiosity for girls is not quite as adequate as the one for boys.

High-curiosity girls show considerable leadership, often reject cultural demands, sometimes feel insecure, and are frequently prejudiced. They tend to be well adjusted in most situations and are quite shrewd, showing a high level of self-control and a desire for companionship. These girls are persistent and are able to conceptualize abstractly.

Their low-curiosity counterparts participate in activities of their peers, are highly enculturated, are realistic in their judgments, show a very strong feeling of security, but are lacking to some degree in adjustment. They are very naive and are unwilling or unable to be leaders.

Interpretation of findings.-- It is obvious that curiosity as a term is not defined. However, the behavior of those who show different aspects of curiosity is set forth more clearly than it has been. The probability is very high that a child having certain characteristics or behaving in a certain way as defined by the factors will show the level of curiosity indicated. Certainly all children showing the behavior will not also be at the indicated level of curiosity. There will also be children differing in curiosity levels who will show factors not tapped by this study. It is, therefore, essential that additional studies similar to the present investigation be conducted using other tests and measuring instruments.

The data obtained from this investigation may be utilized in the development of instruments to identify high- and low-curiosity boys and girls. The results suggest that there are some common areas that might be considered when measuring boys and girls together. However, it appears from the data that separate instruments must be devised for each sex.

Perhaps, the most significant task of the researcher will be to search for reasons for some of the differences. Why should creativity be such a significant factor in the identification of high-curiosity boys and be absent in the identification of high-curiosity girls? Why do both low-curiosity boys and low-curiosity girls show at least one factor heavily loaded with consistency and security, but neither group shows a factor loaded with persistence?

Finally, this research has probably raised more questions than it has answered. It is still necessary to determine what influences in the environment modify these factors. Each factor will have to be studied individually to find what educators can do to modify behavior called curiosity. Perhaps, by obtaining some evidence concerning children differing in curiosity level a beginning has been made.

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## TABLE A

## CORRELATION MATRIX WITH COMMUNALITY ESTIMATES FOR HIGH-CURIOSITY BOYS

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. | 1.000 | -.029 | .205 | .346 | .180 | .355 | .136 | .121 |
| 2. | -.029 | 1.000 | .023 | .158 | -.026 | .052 | .031 | .065 |
| 3. | .205 | .023 | 1.000 | .386 | .280 | .393 | .399 | .333 |
| 4. | .346 | .158 | .386 | 1.000 | .307 | .430 | .430 | .332 |
| 5. | .180 | -.026 | .280 | .307 | 1.000 | .406 | .412 | .221 |
| 6. | .355 | .052 | .393 | .430 | .406 | 1.000 | .483 | .442 |
| 7. | .136 | .031 | .399 | .430 | .412 | .483 | 1.000 | .615 |
| 8. | .121 | .065 | .333 | .332 | .221 | .442 | .615 | 1.000 |
| 9. | .173 | -.099 | .168 | .063 | .185 | .208 | .064 | .179 |
| 10. | .217 | -.020 | .455 | .245 | .134 | .397 | .289 | .296 |
| 11. | .246 | -.149 | .396 | .381 | .339 | .508 | .641 | .462 |
| 12. | .244 | -.076 | .256 | .299 | .413 | .531 | .437 | .354 |
| 13. | .247 | -.003 | .394 | .410 | .327 | .550 | .519 | .418 |
| 14. | .270 | .017 | .219 | .230 | .154 | .333 | .229 | .290 |
| 15. | .240 | -.029 | -.069 | .008 | -.125 | .087 | .067 | -.071 |
| 16. | .286 | -.041 | .097 | .149 | .191 | .142 | -.011 | .054 |
| 17. | .257 | -.083 | .146 | .107 | .083 | .183 | -.050 | .020 |
| 18. | .076 | -.013 | .055 | -.011 | .026 | .015 | -.014 | -.058 |
| 19. | .224 | -.177 | .117 | .031 | -.010 | .045 | -.111 | -.052 |
| 20. | .180 | .240 | .171 | .217 | .058 | .227 | .106 | .086 |
| 21. | -.050 | .197 | -.356 | -.169 | -.262 | -.321 | -.298 | -.356 |
| 22. | .153 | .055 | .282 | .204 | .078 | .152 | .382 | .350 |
| 23. | .095 | -.188 | .049 | -.031 | .002 | -.091 | -.134 | -.274 |
| 24. | -.103 | -.037 | -.258 | -.182 | -.179 | -.313 | -.304 | -.196 |
| 25. | .033 | -.066 | .274 | .124 | .059 | .109 | .184 | .201 |
| 26. | -.175 | -.014 | -.359 | -.238 | -.190 | -.236 | -.396 | -.361 |
| 27. | .668 | -.038 | .101 | .273 | .046 | .163 | .094 | .086 |
| 28. | -.294 | -.008 | -.183 | -.134 | .045 | -.068 | -.110 | -.024 |
| 29. | .235 | .185 | .080 | .241 | .139 | .320 | .214 | .181 |
| 30. | .158 | .070 | .041 | .112 | .112 | .252 | .147 | .141 |
| 31. | .231 | .179 | .130 | .208 | .132 | .339 | .212 | .219 |
| 32. | .410 | .239 | .168 | .296 | .102 | .319 | .214 | .125 |
| 33. | .318 | -.029 | .178 | .212 | .019 | .224 | .163 | .159 |
| 34. | .288 | .004 | .159 | .228 | .029 | .199 | .190 | .225 |
| 35. | -.235 | .062 | -.197 | -.244 | -.273 | -.370 | -.424 | -.219 |
| 36. | .297 | -.022 | .260 | .253 | .166 | .358 | .284 | .246 |
| 37. | .218 | .029 | -.019 | .036 | .002 | .068 | .004 | .015 |
| 38. | .035 | -.016 | -.025 | .041 | -.116 | -.036 | -.064 | -.080 |

TABLE A
(Continued)

| | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. | .173 | .217 | .246 | .244 | .247 | .270 | .240 | .286 |
| 2. | -.099 | -.020 | -.149 | -.076 | -.003 | .017 | -.029 | -.041 |
| 3. | .168 | .455 | .396 | .256 | .394 | .219 | -.069 | .097 |
| 4. | .063 | .245 | .381 | .299 | .410 | .230 | .008 | .149 |
| 5. | .185 | .134 | .339 | .413 | .327 | .154 | -.125 | .191 |
| 6. | .208 | .397 | .508 | .531 | .550 | .333 | .087 | .142 |
| 7. | .064 | .289 | .641 | .437 | .519 | .229 | -.067 | -.011 |
| 8. | .179 | .296 | .462 | .354 | .418 | .290 | -.071 | .054 |
| 9. | 1.000 | .556 | .398 | .329 | .280 | .311 | .126 | .323 |
| 10. | .556 | 1.000 | .500 | .367 | .393 | .382 | .062 | .239 |
| 11. | .398 | .500 | 1.000 | .555 | .648 | .397 | .181 | .220 |
| 12. | .329 | .367 | .555 | 1.000 | .463 | .346 | -.052 | .178 |
| 13. | .280 | .393 | .648 | .463 | 1.000 | .396 | .058 | .220 |
| 14. | .311 | .382 | .397 | .346 | .396 | 1.000 | .008 | .056 |
| 15. | .126 | .062 | .181 | -.052 | .058 | .008 | 1.000 | .372 |
| 16. | .323 | .239 | .220 | .178 | .220 | .056 | .372 | 1.000 |
| 17. | .432 | .409 | .301 | .157 | .242 | .206 | .426 | .851 |
| 18. | .212 | .177 | .098 | .045 | .214 | .207 | .050 | .333 |
| 19. | .419 | .360 | .236 | .159 | .149 | .155 | .432 | .691 |
| 20. | .144 | .274 | .147 | .095 | .197 | .175 | -.020 | .193 |
| 21. | -.379 | -.487 | -.481 | -.330 | -.268 | -.301 | -.070 | -.160 |
| 22. | .127 | .164 | .236 | .105 | .194 | .096 | -.021 | .082 |
| 23. | .269 | .190 | .133 | .076 | .109 | .015 | -.267 | .259 |
| 24. | -.263 | -.354 | .307 | -.268 | -.360 | -.198 | -.043 | -.204 |
| 25. | .206 | .231 | -.307 | .164 | .250 | .097 | .038 | .111 |
| 26. | -.168 | -.421 | -.336 | -.197 | -.360 | -.131 | -.004 | -.253 |
| 27. | .093 | .163 | .170 | .137 | .178 | .188 | .318 | .380 |
| 28. | .017 | -.017 | -.111 | -.037 | -.144 | -.162 | -.185 | -.018 |
| 29. | .038 | .095 | .186 | .093 | .182 | .113 | -.058 | .027 |
| 30. | .021 | .019 | .126 | .107 | .123 | .072 | -.030 | .007 |
| 31. | .103 | .087 | .199 | .120 | .234 | .100 | -.040 | -.022 |
| 32. | -.026 | .065 | .110 | .010 | .186 | .116 | .000 | -.009 |
| 33. | .161 | .244 | .310 | .207 | .314 | .105 | .331 | .379 |
| 34. | .194 | .194 | .295 | .120 | .350 | .095 | .288 | .381 |
| 35. | -.144 | -.063 | -.508 | -.269 | -.513 | -.236 | -.304 | -.375 |
| 36. | .371 | .453 | .458 | .388 | .491 | .266 | .167 | .372 |
| 37. | .225 | .044 | .142 | .067 | .198 | .113 | .187 | .184 |
| 38. | .176 | .143 | .046 | -.014 | -.105 | -.021 | .054 | .081 |

### TABLE A
### (Continued)

| | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|
| 1. | .257 | .076 | .224 | .180 | .050 | .153 | .095 | -.132 |
| 2. | -.083 | -.013 | -.177 | .240 | .197 | .055 | -.188 | -.037 |
| 3. | .146 | .055 | .117 | .171 | -.356 | .282 | .049 | -.258 |
| 4. | .107 | .011 | .031 | .217 | -.169 | .204 | -.031 | -.182 |
| 5. | .083 | .026 | -.010 | .058 | -.262 | .076 | .002 | -.179 |
| 6. | .183 | .015 | .045 | .227 | -.321 | .152 | -.091 | -.313 |
| 7. | -.050 | -.014 | -.111 | .106 | -.298 | .382 | -.013 | -.304 |
| 8. | .020 | -.058 | -.052 | .086 | -.356 | .350 | -.274 | -.196 |
| 9. | .432 | .212 | .419 | .144 | -.379 | .127 | .269 | -.263 |
| 10. | .409 | .177 | .360 | .274 | -.487 | .164 | .190 | -.354 |
| 11. | .301 | .098 | .236 | .147 | -.481 | .236 | .133 | -.307 |
| 12. | .157 | .045 | .159 | .095 | -.330 | .105 | .076 | -.268 |
| 13. | .242 | .214 | .149 | .197 | -.268 | .194 | .109 | -.360 |
| 14. | .206 | .207 | .155 | .175 | -.301 | .096 | .015 | -.198 |
| 15. | .426 | .050 | .432 | .070 | -.020 | -.021 | .267 | -.043 |
| 16. | .851 | .333 | .691 | .193 | -.160 | .082 | .259 | -.204 |
| 17. | 1.000 | .295 | .767 | .133 | -.293 | .167 | .438 | -.237 |
| 18. | .295 | 1.000 | .382 | .137 | -.076 | .001 | .246 | -.110 |
| 19. | .767 | .382 | 1.000 | .138 | -.258 | .180 | .403 | -.135 |
| 20. | .133 | .137 | .138 | 1.000 | -.159 | .138 | -.020 | -.137 |
| 21. | -.293 | -.076 | -.258 | -.159 | 1.000 | -.226 | -.074 | .205 |
| 22. | .167 | .001 | .180 | .138 | -.226 | 1.000 | -.085 | -.185 |
| 23. | .438 | .246 | .403 | -.020 | -.074 | -.085 | 1.000 | -.030 |
| 24. | -.237 | -.110 | -.135 | -.137 | .205 | -.185 | -.030 | 1.000 |
| 25. | .180 | .034 | .152 | .122 | -.336 | .252 | .145 | -.307 |
| 26. | -.319 | -.003 | -.210 | -.210 | .332 | -.438 | -.025 | .360 |
| 27. | .284 | .006 | .255 | .086 | .021 | .158 | .043 | -.083 |
| 28. | .013 | .066 | -.006 | .101 | -.015 | -.071 | -.044 | -.069 |
| 29. | .030 | .120 | .073 | .185 | -.124 | .273 | -.239 | -.004 |
| 30. | .014 | .069 | .065 | .107 | -.170 | .172 | -.187 | .018 |
| 31. | .001 | .022 | .049 | .130 | -.188 | .205 | -.170 | -.080 |
| 32. | .011 | .053 | .034 | .143 | -.041 | .365 | -.206 | -.073 |
| 33. | .370 | .125 | .335 | .136 | -.197 | .248 | .143 | -.333 |
| 34. | .325 | .144 | .291 | .119 | -.166 | .258 | .088 | -.262 |
| 35. | -.257 | -.173 | -.236 | -.048 | .242 | -.129 | -.101 | .315 |
| 36. | .456 | .140 | .427 | .192 | -.410 | .435 | .193 | -.386 |
| 37. | .174 | .134 | .230 | .009 | -.165 | .130 | .110 | -.224 |
| 38. | .711 | -.149 | .007 | .071 | -.106 | -.184 | .137 | .110 |

TABLE A
(Continued)

| | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|
| 1. | .033 | -.175 | .668 | -.294 | .235 | .158 | .231 | .410 |
| 2. | -.086 | -.014 | -.038 | -.008 | .185 | .070 | .179 | .239 |
| 3. | .274 | -.359 | .101 | -.183 | .080 | .041 | .130 | .168 |
| 4. | .124 | -.238 | .273 | -.134 | .241 | .112 | .208 | .290 |
| 5. | .059 | -.190 | .046 | .045 | .139 | .112 | .132 | .102 |
| 6. | .109 | -.236 | .163 | -.068 | .320 | .252 | .339 | .319 |
| 7. | .184 | -.396 | .094 | -.110 | .214 | .147 | .212 | .214 |
| 8. | .201 | -.361 | .086 | -.024 | .181 | .141 | .219 | .125 |
| 9. | .206 | -.168 | .093 | .017 | .038 | .021 | .103 | -.026 |
| 10. | .231 | -.421 | .163 | -.017 | .095 | .019 | .087 | .065 |
| 11. | .307 | -.336 | .170 | -.111 | .186 | .126 | .199 | .110 |
| 12. | .164 | -.197 | .137 | -.037 | .093 | .107 | .120 | .010 |
| 13. | .250 | -.360 | .178 | -.144 | .182 | .123 | .234 | .186 |
| 14. | .097 | -.131 | .188 | -.162 | .113 | .072 | .100 | .116 |
| 15. | .038 | -.004 | .318 | -.185 | -.058 | -.030 | -.040 | 0.000 |
| 16. | .111 | -.253 | .380 | -.018 | .027 | .007 | -.022 | -.009 |
| 17. | .180 | -.319 | .284 | .013 | .030 | .014 | .001 | -.011 |
| 18. | -.034 | -.003 | .006 | .066 | .120 | .069 | .022 | .053 |
| 19. | .152 | -.210 | .255 | -.006 | .073 | .065 | .049 | .034 |
| 20. | .122 | -.210 | .086 | .101 | .185 | .107 | .130 | .143 |
| 21. | -.336 | .332 | .021 | -.015 | -.124 | -.170 | -.188 | -.041 |
| 22. | .252 | -.438 | .158 | -.071 | .273 | .172 | .205 | .365 |
| 23. | .145 | -.025 | .043 | -.044 | -.239 | -.187 | -.170 | -.206 |
| 24. | -.307 | .360 | -.083 | -.069 | -.004 | .018 | -.079 | -.073 |
| 25. | 1.000 | -.355 | -.080 | .104 | .171 | .146 | .210 | .173 |
| 26. | -.355 | 1.000 | -.110 | -.052 | -.114 | -.094 | -.036 | -.150 |
| 27. | -.080 | -.110 | 1.000 | -.313 | .274 | .178 | .271 | .416 |
| 28. | .104 | -.052 | -.313 | 1.000 | -.007 | .024 | .004 | -.114 |
| 29. | .171 | -.114 | .274 | -.007 | 1.000 | .845 | 1.003 | .954 |
| 30. | .146 | -.094 | .178 | .024 | .845 | 1.000 | .923 | .782 |
| 31. | .210 | -.036 | .271 | .004 | 1.003 | .923 | 1.000 | .947 |
| 32. | .173 | -.150 | .416 | -.114 | .954 | .782 | .947 | 1.000 |
| 33. | .166 | -.358 | .346 | -.035 | .104 | .127 | .128 | .223 |
| 34. | .166 | -.310 | .320 | -.084 | .118 | .131 | .118 | .217 |
| 35. | -.308 | .290 | -.238 | .062 | -.093 | -.108 | -.125 | -.114 |
| 36. | .313 | -.477 | .300 | .010 | .252 | .261 | .346 | .310 |
| 37. | .225 | -.042 | .114 | -.124 | .081 | .841 | .092 | .190 |
| 38. | .076 | .019 | .045 | .230 | -.055 | -.030 | .028 | -.036 |

TABLE A
(Continued)

| | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|
| 1. | .318 | .288 | -.235 | .297 | .218 | .035 |
| 2. | -.029 | .004 | .062 | -.022 | .029 | -.016 |
| 3. | .178 | .159 | -.197 | .260 | -.019 | -.025 |
| 4. | .212 | .228 | -.244 | .253 | .036 | .041 |
| 5. | .019 | .029 | -.273 | .166 | .002 | -.116 |
| 6. | .224 | .199 | -.370 | .359 | .068 | -.036 |
| 7. | .163 | .190 | -.424 | .284 | .004 | -.064 |
| 8. | .159 | .225 | -.219 | .246 | .015 | -.080 |
| 9. | .161 | .194 | -.144 | .371 | .225 | .176 |
| 10. | .244 | .194 | -.063 | .453 | .044 | .143 |
| 11. | .310 | .295 | -.508 | .458 | .142 | .046 |
| 12. | .207 | .120 | -.269 | .388 | .067 | -.014 |
| 13. | .314 | .350 | -.513 | .491 | .198 | -.105 |
| 14. | .105 | .095 | -.236 | .265 | .113 | -.021 |
| 15. | .331 | .288 | -.304 | .167 | .187 | .054 |
| 16. | .379 | .381 | -.375 | .372 | .184 | .081 |
| 17. | .370 | .325 | -.257 | .456 | .174 | .071 |
| 18. | .125 | .144 | -.173 | .140 | .134 | -.149 |
| 19. | .335 | .291 | -.236 | .427 | .230 | .007 |
| 20. | .136 | .119 | -.048 | .192 | .009 | .071 |
| 21. | -.197 | -.166 | .242 | -.410 | -.165 | -.106 |
| 22. | .248 | .258 | -.129 | .435 | .130 | -.184 |
| 23. | .143 | .088 | -.101 | .193 | .110 | .137 |
| 24. | -.333 | -.262 | .315 | -.386 | -.224 | .110 |
| 25. | .166 | .166 | -.308 | .313 | .225 | .076 |
| 26. | -.358 | -.310 | .290 | -.477 | -.042 | .018 |
| 27. | .346 | .320 | -.238 | .300 | .114 | .045 |
| 28. | -.035 | -.084 | .062 | .010 | -.124 | .230 |
| 29. | .104 | .118 | -.093 | .252 | .081 | -.055 |
| 30. | .127 | .131 | -.108 | .261 | .084 | -.030 |
| 31. | .128 | .118 | -.125 | .346 | .092 | .028 |
| 32. | .223 | .217 | -.114 | .310 | .190 | -.036 |
| 33. | 1.000 | .965 | -.342 | .507 | .241 | -.006 |
| 34. | .965 | 1.000 | -.396 | .454 | .242 | -.064 |
| 35. | -.342 | -.396 | 1.000 | -.402 | -.336 | -.046 |
| 36. | .507 | .454 | -.402 | 1.000 | .301 | -.032 |
| 37. | .241 | .242 | -.336 | .301 | 1.000 | .080 |
| 38. | -.006 | -.064 | -.046 | .032 | .080 | 1.000 |

## TABLE B

## CORRELATION MATRIX WITH COMMUNALITY ESTIMATES FOR LOW-CURIOSITY BOYS

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. | 1.000 | .045 | .239 | .286 | .230 | .308 | .236 | .215 |
| 2. | -.045 | 1.000 | .088 | .045 | .070 | .027 | -.087 | .103 |
| 3. | .239 | .088 | 1.000 | .480 | .412 | .502 | .293 | .356 |
| 4. | .286 | .045 | .480 | 1.000 | .604 | .873 | .567 | .479 |
| 5. | .230 | .070 | .412 | .604 | 1.000 | .706 | .620 | .440 |
| 6. | .308 | .027 | .502 | .873 | .706 | 1.000 | .821 | .533 |
| 7. | .236 | -.087 | .293 | .567 | .620 | .821 | 1.000 | .626 |
| 8. | .215 | .103 | .356 | .479 | .440 | .533 | .626 | 1.000 |
| 9. | .388 | -.049 | .463 | .511 | .314 | .613 | .363 | .411 |
| 10. | .344 | .106 | .471 | .644 | .439 | .731 | .501 | .413 |
| 11. | .336 | .001 | .467 | .732 | .634 | .861 | .777 | .597 |
| 12. | .211 | .035 | .392 | .508 | .665 | .648 | .527 | .449 |
| 13. | .414 | -.066 | .444 | .633 | .492 | .871 | .659 | .496 |
| 14. | .322 | .038 | .405 | .641 | .381 | .765 | .483 | .342 |
| 15. | .261 | .111 | .222 | .091 | .184 | .184 | .016 | .144 |
| 16. | .434 | .072 | .263 | .361 | .267 | .516 | .318 | .237 |
| 17. | .333 | .039 | .164 | .204 | .252 | .364 | .172 | .045 |
| 18. | .155 | .025 | .104 | .098 | -1.000 | .122 | .067 | .103 |
| 19. | .611 | -.019 | .294 | .457 | .334 | .571 | .347 | .202 |
| 20. | .149 | -.023 | .121 | .214 | .121 | .148 | .176 | .156 |
| 21. | -.222 | .136 | -.389 | -.453 | -.464 | -.617 | -.352 | -.265 |
| 22. | .258 | -.054 | .253 | .491 | .425 | .611 | .417 | .354 |
| 23. | .229 | -.140 | .154 | .058 | .105 | .066 | -.006 | -.076 |
| 24. | -.271 | .122 | -.225 | -.351 | -.308 | -.516 | -.395 | -.264 |
| 25. | .234 | -.200 | .213 | .333 | .200 | .399 | .235 | .234 |
| 26. | -.170 | .133 | -.172 | -.540 | -.457 | .580 | -.467 | -.407 |
| 27. | .685 | .060 | .299 | .230 | .127 | .279 | .124 | .247 |
| 28. | -.555 | -.034 | -.150 | .019 | .088 | -.054 | .002 | -.092 |
| 29. | .171 | .012 | .105 | .276 | .186 | .284 | .195 | .038 |
| 30. | .168 | .023 | .178 | .280 | .110 | .325 | .195 | .007 |
| 31. | .197 | -.056 | .216 | .334 | .285 | .419 | .202 | .031 |
| 32. | .323 | -.096 | .232 | .316 | .239 | .373 | .230 | .090 |
| 33. | .403 | .053 | .157 | .328 | .321 | .432 | .308 | .317 |
| 34. | .349 | .093 | .195 | .307 | .268 | .440 | .315 | .335 |
| 35. | -.324 | -.032 | -.287 | -.359 | -.298 | -.382 | -.385 | -.411 |
| 36. | .505 | .010 | .398 | .560 | .399 | .647 | .468 | .333 |
| 37. | .093 | .028 | -.004 | .137 | .140 | .179 | .068 | .016 |
| 38. | .147 | .063 | .001 | -.005 | .041 | .082 | .126 | .154 |

TABLE B
(Continued)

| | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. | .388 | .344 | .336 | .211 | .414 | .322 | .261 | .434 |
| 2. | -.049 | .106 | .001 | .035 | -.066 | .038 | .111 | .072 |
| 3. | .463 | .471 | .467 | .392 | .444 | .405 | .222 | .263 |
| 4. | .511 | .644 | .732 | .508 | .633 | .641 | .091 | .361 |
| 5. | .314 | .439 | .634 | .665 | .492 | .381 | .184 | .267 |
| 6. | .613 | .731 | .861 | .648 | .871 | .765 | .184 | .516 |
| 7. | .363 | .501 | .777 | .527 | .659 | .483 | .016 | .318 |
| 8. | .411 | .413 | .597 | .449 | .496 | .342 | .144 | .237 |
| 9. | 1.000 | .649 | .712 | .439 | .647 | .624 | .201 | .479 |
| 10. | .649 | 1.000 | .732 | .464 | .669 | .750 | .155 | .463 |
| 11. | .712 | .732 | 1.000 | .618 | .771 | .702 | .248 | .445 |
| 12. | .439 | .464 | .618 | 1.000 | .572 | .444 | .193 | .327 |
| 13. | .647 | .669 | .771 | .572 | 1.000 | .609 | .169 | .558 |
| 14. | .624 | .749 | .702 | .444 | .609 | 1.000 | .279 | .393 |
| 15. | .201 | .155 | .248 | .193 | .169 | .279 | 1.000 | .049 |
| 16. | .479 | .463 | .445 | .327 | .558 | .393 | .049 | 1.000 |
| 17. | .480 | .428 | .295 | .205 | .353 | .311 | .092 | .784 |
| 18. | .205 | .223 | .030 | -.008 | .164 | .128 | .031 | .323 |
| 19. | .638 | .613 | .562 | .366 | .607 | .574 | .226 | .824 |
| 20. | .219 | .129 | .247 | .113 | .269 | .222 | .046 | .205 |
| 21. | -.377 | -.573 | -.491 | -.445 | -.473 | -.414 | -.259 | -.397 |
| 22. | .432 | .434 | .456 | .397 | .566 | .329 | .012 | .348 |
| 23. | .297 | .187 | .197 | .182 | .235 | .243 | .148 | .161 |
| 24. | -.417 | -.439 | -.384 | -.246 | -.590 | -.429 | -.102 | -.390 |
| 25. | .444 | .411 | .431 | .370 | .532 | .364 | .223 | .206 |
| 26. | -.425 | -.443 | -.537 | -.479 | -.586 | -.486 | -.018 | -.355 |
| 27. | .327 | .319 | .198 | .189 | .331 | .311 | .352 | .398 |
| 28. | -.302 | -.259 | -.148 | .018 | -.237 | -.042 | -.057 | -.280 |
| 29. | .173 | .264 | .119 | .200 | .181 | .259 | .175 | .057 |
| 30. | .142 | .347 | .133 | .196 | .178 | .256 | .215 | .093 |
| 31. | .242 | .431 | .199 | .323 | .280 | .369 | .311 | .158 |
| 32. | .282 | .375 | .227 | .273 | .308 | .288 | .227 | .200 |
| 33. | .283 | .308 | .329 | .302 | .441 | .331 | .270 | .432 |
| 34. | .308 | .335 | .327 | .286 | .405 | .396 | .222 | .403 |
| 35. | -.328 | -.459 | -.486 | -.331 | -.456 | -.354 | -.154 | -.413 |
| 36. | .563 | .711 | .630 | .436 | .670 | .726 | .311 | .594 |
| 37. | .195 | .117 | .169 | .136 | .136 | .115 | -.011 | .134 |
| 38. | .049 | .134 | .225 | .011 | .167 | -.062 | .106 | .146 |

TABLE B
(Continued)

| | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|
| 1. | .333 | .155 | .611 | .149 | -.222 | .258 | .229 | -.271 |
| 2. | .039 | .025 | -.019 | -.023 | .136 | -.054 | -.140 | .122 |
| 3. | .164 | .104 | .294 | .121 | -.389 | .253 | .154 | -.225 |
| 4. | .204 | .098 | .457 | .214 | -.453 | .491 | .058 | -.351 |
| 5. | .252 | -1.000 | .334 | .121 | -.464 | .425 | .105 | -.308 |
| 6. | .364 | .122 | .571 | .148 | -.617 | .611 | .066 | -.516 |
| 7. | .172 | .067 | .347 | .176 | -.352 | .417 | -.006 | -.395 |
| 8. | .045 | .103 | .202 | .156 | -.265 | .354 | -.076 | -.264 |
| 9. | .480 | .205 | .638 | .219 | -.377 | .432 | .297 | -.417 |
| 10. | .428 | .223 | .613 | .129 | -.573 | .434 | .187 | -.439 |
| 11. | .295 | .030 | .562 | .247 | -.491 | .456 | .197 | -.384 |
| 12. | .205 | -.008 | .366 | .113 | -.445 | .397 | .182 | -.246 |
| 13. | .353 | .164 | .607 | .269 | -.473 | .566 | .235 | -.590 |
| 14. | .311 | .128 | .574 | .222 | -.414 | .329 | .243 | -.429 |
| 15. | .092 | .031 | .226 | .046 | -.259 | .012 | .148 | -.102 |
| 16. | .784 | .323 | .824 | .205 | -.397 | .348 | .161 | -.390 |
| 17. | 1.000 | .409 | .974 | .146 | -.271 | .222 | .262 | -.229 |
| 18. | .409 | 1.000 | .462 | .059 | -.172 | .206 | .138 | -.129 |
| 19. | .974 | .462 | 1.000 | .323 | -.398 | .422 | .332 | -.398 |
| 20. | .146 | .059 | .323 | 1.000 | -.121 | .119 | .136 | -.290 |
| 21. | -.271 | -.172 | -.398 | -.121 | 1.000 | -.441 | -.137 | .379 |
| 22. | .222 | .206 | .422 | .119 | -.441 | 1.000 | .143 | -.322 |
| 23. | .262 | .138 | .332 | .136 | -.137 | .143 | 1.000 | -.138 |
| 24. | -.229 | -.129 | -.398 | -.290 | .379 | -.322 | -.138 | 1.000 |
| 25. | .130 | .149 | .288 | .206 | -.287 | .318 | .272 | -.398 |
| 26. | -.182 | -.160 | -.373 | -.270 | .378 | -.463 | -.095 | .408 |
| 27. | .281 | .193 | .458 | .179 | -.260 | .218 | .166 | -.159 |
| 28. | -.254 | -.170 | -.310 | -.262 | .192 | -.074 | -.022 | .105 |
| 29. | .052 | .107 | .092 | -.046 | -.194 | .087 | .137 | -.156 |
| 30. | .079 | .089 | .122 | -.020 | -.202 | .036 | .218 | -.255 |
| 31. | .191 | .065 | .239 | .029 | -.366 | .197 | .248 | -.295 |
| 32. | .138 | .039 | .242 | .058 | -.323 | .024 | .177 | -.240 |
| 33. | .263 | .110 | .360 | .128 | -.334 | .156 | .159 | -.345 |
| 34. | .232 | .106 | .339 | .159 | -.265 | .115 | .131 | -.400 |
| 35. | -.317 | -.154 | -.470 | -.360 | .224 | .133 | -.192 | .333 |
| 36. | .472 | .327 | .694 | .304 | -.552 | .362 | .303 | -.510 |
| 37. | .169 | -.093 | .067 | -.124 | -.089 | .113 | .190 | -.200 |
| 38. | .012 | -.034 | .053 | .076 | -.101 | .101 | -.040 | -.121 |

## TABLE B
(Continued)

| | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|
| 1. | .234 | -.170 | .685 | -.555 | .171 | .168 | .197 | .323 |
| 2. | -.200 | .133 | .060 | -.034 | .012 | .023 | -.056 | -.096 |
| 3. | .213 | -.172 | .299 | -.150 | .105 | .178 | .216 | .232 |
| 4. | .333 | -.540 | .230 | .019 | .276 | .280 | .334 | .316 |
| 5. | .200 | -.457 | .127 | .088 | .186 | .110 | .285 | .239 |
| 6. | .399 | -.580 | .279 | -.054 | .284 | .325 | .419 | .273 |
| 7. | .235 | -.467 | .124 | .002 | .195 | .195 | .202 | .230 |
| 8. | .234 | -.407 | .247 | -.092 | .038 | .007 | .031 | .090 |
| 9. | .444 | -.425 | .327 | -.302 | .173 | .142 | .242 | .282 |
| 10. | .411 | -.443 | .319 | -.259 | .264 | .347 | .431 | .375 |
| 11. | .431 | -.537 | .198 | -.148 | .119 | .133 | .199 | .227 |
| 12. | .370 | -.479 | .189 | .018 | .200 | .196 | .323 | .273 |
| 13. | .532 | -.586 | .331 | -.237 | .181 | .178 | .280 | .308 |
| 14. | .364 | -.486 | .311 | -.042 | .259 | .256 | .369 | .288 |
| 15. | .223 | -.018 | .352 | -.057 | .175 | .215 | .311 | .227 |
| 16. | .206 | -.355 | .398 | -.280 | .057 | .093 | .158 | .200 |
| 17. | .130 | -.182 | .281 | -.254 | .052 | .079 | .191 | .138 |
| 18. | .149 | -.160 | .193 | -.170 | .107 | .089 | .065 | .039 |
| 19. | .288 | -.373 | .458 | -.310 | .092 | .122 | .299 | .242 |
| 20. | .206 | -.270 | .179 | -.026 | -.046 | -.020 | .029 | .058 |
| 21. | -.287 | .378 | -.260 | .192 | -.194 | -.202 | -.366 | -.323 |
| 22. | .318 | -.463 | .218 | -.074 | .087 | .036 | .197 | .024 |
| 23. | .272 | -.095 | .166 | -.022 | .137 | .218 | .248 | .177 |
| 24. | -.398 | .408 | -.159 | .105 | -.156 | -.255 | -.295 | -.240 |
| 25. | 1.000 | -.368 | .224 | -.171 | .121 | .179 | .220 | .240 |
| 26. | -.368 | 1.000 | -.094 | .065 | -.105 | -.039 | -.172 | -.122 |
| 27. | .224 | -.094 | 1.000 | -.457 | .195 | .166 | .189 | .282 |
| 28. | -.171 | .065 | -.457 | 1.000 | .010 | -.099 | .092 | -.089 |
| 29. | .121 | -.105 | .195 | .010 | 1.000 | .684 | .670 | .429 |
| 30. | .179 | -.039 | .166 | -.099 | .684 | 1.000 | .697 | .674 |
| 31. | .220 | -.172 | .189 | .092 | .670 | .697 | 1.000 | .711 |
| 32. | .240 | -.122 | .282 | -.089 | .649 | .674 | .711 | 1.000 |
| 33. | .197 | -.363 | .327 | -.163 | .241 | .174 | .241 | .332 |
| 34. | .152 | -.374 | .299 | -.169 | .212 | .216 | .241 | .310 |
| 35. | -.190 | .337 | -.317 | .153 | -.037 | -.106 | -.010 | -.191 |
| 36. | .441 | -.484 | .469 | -.301 | .355 | .377 | .473 | .450 |
| 37. | .217 | -.181 | .061 | -.046 | .164 | .162 | .141 | .087 |
| 38. | .081 | .010 | .092 | -.185 | -.072 | .092 | -.024 | .033 |

TABLE B
(Continued)

| | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|
| 1. | .403 | .349 | -.324 | .505 | .093 | .147 |
| 2. | .053 | .093 | -.032 | .010 | .028 | .063 |
| 3. | .157 | .195 | -.287 | .398 | -.004 | .001 |
| 4. | .328 | .307 | -.359 | .560 | .137 | -.005 |
| 5. | .321 | .268 | -.298 | .399 | .140 | .041 |
| 6. | .432 | .440 | -.382 | .647 | .179 | .082 |
| 7. | .308 | .315 | -.385 | .468 | .068 | .126 |
| 8. | .317 | .335 | -.411 | .333 | .016 | .154 |
| 9. | .283 | .308 | -.328 | .563 | .195 | .049 |
| 10. | .308 | .335 | -.459 | .711 | .117 | .134 |
| 11. | .329 | .327 | -.486 | .630 | .169 | .225 |
| 12. | .302 | .286 | -.331 | .436 | .136 | .011 |
| 13. | .441 | .405 | -.456 | .670 | .136 | .167 |
| 14. | .331 | .396 | -.354 | .726 | .115 | -.062 |
| 15. | .270 | .222 | -.154 | .311 | -.011 | .106 |
| 16. | .432 | .403 | -.413 | .594 | .134 | .146 |
| 17. | .263 | .232 | -.317 | .472 | .169 | .012 |
| 18. | .110 | .106 | -.154 | .327 | -.093 | -.034 |
| 19. | .360 | .339 | -.470 | .694 | .067 | .053 |
| 20. | .128 | .159 | -.360 | .304 | -.124 | .076 |
| 21. | -.334 | -.265 | .224 | -.552 | -.089 | -.101 |
| 22. | .156 | .115 | -.133 | .362 | .113 | .101 |
| 23. | .159 | .131 | -.192 | .303 | .190 | -.040 |
| 24. | -.345 | -.400 | .333 | -.510 | -.200 | -.121 |
| 25. | .197 | .152 | -.190 | .441 | .217 | .081 |
| 26. | -.363 | -.374 | .337 | -.484 | -.181 | .010 |
| 27. | .327 | .299 | -.317 | .469 | .061 | .092 |
| 28. | -.163 | -.169 | .153 | -.301 | -.046 | -.185 |
| 29. | .241 | .212 | .037 | .355 | .164 | -.072 |
| 30. | .174 | .216 | -.106 | .377 | .162 | .092 |
| 31. | .241 | .241 | -.099 | .473 | .141 | -.024 |
| 32. | .332 | .310 | -.191 | .450 | .087 | .033 |
| 33. | 1.000 | .849 | -.454 | .501 | .127 | .052 |
| 34. | .849 | 1.000 | -.430 | .438 | .097 | .090 |
| 35. | -.454 | -.430 | 1.000 | -.537 | -.054 | -.104 |
| 36. | .501 | .438 | -.537 | 1.000 | .189 | .187 |
| 37. | .127 | .097 | -.054 | .189 | 1.000 | -.016 |
| 38. | .052 | .090 | -.104 | .187 | -.016 | 1.000 |

## TABLE C

## CORRELATION MATRIX WITH COMMUNALITY ESTIMATES FOR HIGH-CURIOSITY GIRLS

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. | 1.000 | -.095 | .316 | .489 | .360 | .333 | .403 | .365 |
| 2. | -.095 | 1.000 | .110 | -.045 | -.060 | .052 | -.067 | .031 |
| 3. | .316 | .110 | 1.000 | .561 | .280 | .382 | .531 | .500 |
| 4. | .489 | -.045 | .561 | 1.000 | .601 | .794 | .733 | .524 |
| 5. | .360 | -.060 | .280 | .601 | 1.000 | .525 | .488 | .519 |
| 6. | .333 | .052 | .382 | .794 | .525 | 1.000 | .596 | .536 |
| 7. | .403 | -.067 | .531 | .733 | .488 | .596 | 1.000 | .629 |
| 8. | .365 | .031 | .500 | .524 | .519 | .536 | .629 | 1.000 |
| 9. | .421 | -.063 | .242 | .393 | .212 | .258 | .327 | .162 |
| 10. | .182 | .126 | .467 | .486 | .401 | .502 | .395 | .331 |
| 11. | .417 | -.091 | .478 | .598 | .421 | .398 | .582 | .458 |
| 12. | .309 | .104 | .306 | .502 | .401 | .433 | .418 | .433 |
| 13. | .400 | -.089 | .415 | .786 | .593 | .694 | .693 | .515 |
| 14. | .292 | .035 | .228 | .544 | .429 | .445 | .395 | .387 |
| 15. | .388 | .100 | .175 | .245 | .041 | .234 | .184 | .102 |
| 16. | .268 | -.134 | .144 | .336 | .110 | .171 | .140 | -.044 |
| 17. | .353 | -.064 | .227 | .432 | .224 | .217 | .264 | .064 |
| 18. | .284 | -.090 | .044 | .056 | -.035 | .119 | .100 | .032 |
| 19. | .452 | -.175 | .263 | .438 | .179 | .211 | .260 | .075 |
| 20. | .224 | -.019 | .219 | .260 | .094 | .303 | .220 | .154 |
| 21. | -.259 | .542 | -.188 | -.331 | -.234 | -.257 | -.189 | -.154 |
| 22. | .213 | .148 | .372 | .523 | .389 | .452 | .380 | .283 |
| 23. | .316 | -.162 | .151 | .312 | .196 | .108 | .190 | .027 |
| 24. | -.261 | .059 | -.078 | -.315 | -.242 | -.328 | -.246 | -.154 |
| 25. | .061 | .015 | .372 | .515 | .103 | .303 | .200 | .041 |
| 26. | -.235 | -.066 | -.330 | -.452 | -.384 | -.352 | -.298 | -.248 |
| 27. | .697 | .065 | .227 | .391 | .276 | .305 | .254 | .324 |
| 28. | -.338 | .005 | -.067 | -.039 | .096 | .055 | -.048 | -.060 |
| 29. | .517 | -.053 | .240 | .609 | .392 | .483 | .388 | .373 |
| 30. | .489 | -.128 | .199 | .488 | .308 | .335 | .273 | .286 |
| 31. | .463 | -.102 | .201 | .546 | .283 | .379 | .349 | .348 |
| 32. | .517 | -.099 | .259 | .598 | .413 | .449 | .388 | .306 |
| 33. | .633 | -.081 | .256 | .460 | .333 | .338 | .287 | .401 |
| 34. | .557 | -.013 | .229 | .409 | .333 | .387 | .302 | .415 |
| 35. | -.662 | .104 | -.379 | -.570 | -.420 | -.466 | -.472 | -.469 |
| 36. | .561 | -.009 | .381 | .695 | .322 | .569 | .426 | .240 |
| 37. | .269 | -.127 | .039 | .257 | .062 | .106 | .164 | .188 |
| 38. | .221 | .039 | -.100 | .087 | .154 | .081 | .047 | .050 |

## TABLE C
(Continued)

| | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. | .421 | .182 | .417 | .309 | .400 | .292 | .388 | .268 |
| 2. | -.063 | .126 | -.091 | .104 | -.089 | .035 | .100 | -.134 |
| 3. | .242 | .467 | .478 | .306 | .415 | .228 | .175 | .144 |
| 4. | .393 | .486 | .598 | .502 | .786 | .544 | .245 | .336 |
| 5. | .212 | .401 | .421 | .401 | .593 | .429 | .041 | .110 |
| 6. | .258 | .502 | .398 | .433 | .694 | .445 | .234 | .171 |
| 7. | .327 | .395 | .582 | .418 | .693 | .395 | .184 | .140 |
| 8. | .162 | .331 | .458 | .433 | .515 | .387 | .102 | -.044 |
| 9. | 1.000 | .392 | .530 | .371 | .478 | .419 | .146 | .227 |
| 10. | .392 | 1.000 | .439 | .514 | .523 | .490 | .147 | .290 |
| 11. | .530 | .439 | 1.000 | .481 | .633 | .359 | .126 | .318 |
| 12. | .371 | .514 | .481 | 1.000 | .547 | .498 | .099 | .171 |
| 13. | .478 | .523 | .633 | .547 | 1.000 | .562 | .233 | .236 |
| 14. | .419 | .490 | .359 | .498 | .562 | 1.000 | .208 | .116 |
| 15. | .146 | .147 | .126 | .099 | .233 | .208 | 1.000 | .217 |
| 16. | .227 | .290 | .318 | .171 | .236 | .116 | .217 | 1.000 |
| 17. | .306 | .376 | .374 | .186 | .346 | .204 | .311 | .634 |
| 18. | .219 | .028 | .158 | -.034 | .085 | .058 | -.002 | .014 |
| 19. | .358 | .384 | .384 | .224 | .305 | .204 | .294 | .514 |
| 20. | .089 | .237 | .173 | .112 | .256 | .227 | .163 | .147 |
| 21. | -.270 | -.273 | -.257 | -.229 | -.347 | -.282 | -.101 | -.229 |
| 22. | .299 | .387 | .375 | .313 | .527 | .343 | .137 | .016 |
| 23. | .350 | .118 | .326 | .156 | .234 | .177 | .141 | .300 |
| 24. | -.269 | -.218 | -.187 | -.327 | -.419 | -.289 | -.125 | -.146 |
| 25. | .224 | .216 | .304 | .212 | .354 | .235 | .164 | .249 |
| 26. | -.228 | -.348 | -.343 | -.372 | -.442 | -.396 | -.156 | -.153 |
| 27. | .315 | .149 | .222 | .343 | .290 | .312 | .390 | .138 |
| 28. | -.155 | .074 | -.063 | -.084 | -.075 | -.039 | -.225 | -.059 |
| 29. | .255 | .228 | .344 | .397 | .500 | .328 | .378 | .253 |
| 30. | .264 | .214 | .275 | .288 | .386 | .297 | .173 | .256 |
| 31. | .313 | .200 | .343 | .442 | .490 | .343 | .161 | .260 |
| 32. | .286 | .257 | .383 | .467 | .525 | .347 | .247 | .263 |
| 33. | .218 | .099 | .340 | .252 | .288 | .198 | .231 | .182 |
| 34. | .222 | .087 | .308 | .251 | .323 | .179 | .154 | .079 |
| 35. | -.381 | -.221 | -.527 | -.376 | -.532 | -.247 | -.333 | -.242 |
| 36. | .442 | .402 | .453 | .404 | .575 | .313 | .537 | .308 |
| 37. | .152 | -.078 | .153 | .033 | .237 | .148 | .242 | .199 |
| 38. | .073 | .047 | .104 | -.045 | .109 | .101 | .066 | .110 |

TABLE C
(Continued)

| | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|
| 1. | .353 | .284 | .452 | .224 | -.259 | .213 | .316 | -.261 |
| 2. | -.064 | -.090 | -.175 | -.019 | .054 | .148 | -.162 | .059 |
| 3. | .227 | .044 | .263 | .219 | -.188 | .372 | .151 | 0.078 |
| 4. | .432 | .056 | .438 | .260 | -.331 | .523 | .312 | -.315 |
| 5. | .224 | -.035 | .179 | .094 | -.234 | .389 | .196 | -.242 |
| 6. | .217 | .119 | .211 | .303 | -.257 | .452 | .108 | -.328 |
| 7. | .264 | .100 | .260 | .220 | -.189 | .380 | .190 | -.246 |
| 8. | .064 | .032 | .075 | .154 | -.154 | .283 | .027 | -.154 |
| 9. | .306 | .219 | .358 | .089 | -.270 | .299 | .350 | -.269 |
| 10. | .376 | .028 | .384 | .237 | -.273 | .387 | .118 | -.218 |
| 11. | .374 | .158 | .384 | .173 | -.257 | .375 | .326 | -.187 |
| 12. | .186 | -.034 | .224 | .112 | -.229 | .313 | .156 | -.327 |
| 13. | .346 | .085 | .305 | .256 | -.347 | .527 | .234 | -.419 |
| 14. | .204 | .058 | .204 | .227 | -.282 | .343 | .177 | -.289 |
| 15. | .311 | -.002 | .294 | .163 | -.101 | .137 | .141 | -.125 |
| 16. | .634 | .014 | .514 | .147 | -.229 | .016 | .300 | -.146 |
| 17. | 1.000 | .103 | .757 | .184 | -.337 | .107 | .299 | -.243 |
| 18. | .103 | 1.000 | .308 | .216 | -.131 | -.091 | .084 | -.025 |
| 19. | .757 | .308 | 1.000 | .250 | -.264 | .002 | .309 | -.227 |
| 20. | .184 | .216 | .250 | 1.000 | -.139 | .104 | .094 | -.264 |
| 21. | -.337 | -.131 | -.264 | -.139 | 1.000 | -.316 | -.078 | .302 |
| 22. | .107 | -.091 | .002 | .104 | -.316 | 1.000 | .101 | -.244 |
| 23. | .299 | .084 | .309 | .094 | -.078 | .101 | 1.000 | -.111 |
| 24. | -.243 | -.245 | -.227 | -.264 | .302 | -.244 | -.111 | 1.000 |
| 25. | .302 | .148 | .357 | .111 | -.257 | .219 | .225 | -.271 |
| 26. | -.243 | -.005 | -.239 | -.145 | .361 | -.453 | -.108 | .279 |
| 27. | .248 | .242 | .308 | .133 | -.251 | .110 | .212 | -.132 |
| 28. | .001 | -.046 | -.020 | .078 | -.056 | -.021 | -.127 | -.019 |
| 29. | .353 | .209 | .286 | .155 | -.407 | .357 | .138 | -.248 |
| 30. | .346 | .210 | .238 | .135 | -.277 | .219 | .187 | -.115 |
| 31. | .297 | .155 | .293 | .112 | -.341 | .267 | .193 | -.241 |
| 32. | .402 | .202 | .336 | .173 | -.325 | .296 | .233 | -.288 |
| 33. | .353 | .266 | .386 | .297 | -.222 | .128 | .218 | -.237 |
| 34. | .234 | .202 | .234 | .263 | -.164 | .185 | .196 | -.210 |
| 35. | -.288 | -.218 | -.406 | -.326 | .205 | -.269 | -.311 | .311 |
| 36. | .488 | .115 | .469 | .264 | -.407 | .564 | .327 | -.370 |
| 37. | .142 | .003 | .142 | .116 | -.101 | -.015 | .150 | -.150 |
| 38. | .069 | .085 | .045 | .053 | -.159 | .267 | .015 | -.137 |

### TABLE C
(Continued)

| | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|
| 1. | .061 | -.235 | .697 | -.338 | .517 | .489 | .463 | .517 |
| 2. | .015 | -.066 | .065 | .005 | -.053 | -.128 | -.102 | -.099 |
| 3. | .372 | -.330 | .227 | -.067 | .240 | .199 | .201 | .259 |
| 4. | .515 | -.452 | .391 | -.039 | .609 | .488 | .546 | .598 |
| 5. | .103 | -.384 | .276 | .096 | .392 | .308 | .283 | .413 |
| 6. | .303 | -.352 | .305 | .055 | .483 | .335 | .379 | .449 |
| 7. | .200 | -.298 | .254 | -.048 | .388 | .273 | .349 | .388 |
| 8. | .041 | -.248 | .324 | -.060 | .373 | .286 | .348 | .306 |
| 9. | .224 | -.228 | .315 | -.155 | .255 | .264 | .313 | .286 |
| 10. | .216 | -.348 | .149 | .074 | .228 | .214 | .200 | .257 |
| 11. | .304 | -.343 | .222 | -.063 | .344 | .275 | .343 | .383 |
| 12. | .212 | -.372 | .343 | -.084 | .397 | .288 | .442 | .467 |
| 13. | .354 | -.442 | .290 | -.075 | .500 | .386 | .490 | .525 |
| 14. | .235 | -.396 | .312 | -.039 | .328 | .297 | .343 | .347 |
| 15. | .164 | -.156 | .390 | -.225 | .378 | .173 | .161 | .247 |
| 16. | .249 | -.153 | .138 | -.059 | .253 | .256 | .260 | .263 |
| 17. | .302 | -.243 | .248 | .001 | .353 | .346 | .297 | .402 |
| 18. | .148 | -.005 | .242 | -.046 | .209 | .210 | .155 | .202 |
| 19. | .357 | -.239 | .308 | -.020 | .286 | .238 | .293 | .336 |
| 20. | .111 | -.145 | .133 | .078 | .155 | .135 | .112 | .173 |
| 21. | -.257 | .361 | -.251 | -.056 | -.407 | -.277 | -.341 | -.325 |
| 22. | .219 | -.453 | .110 | -.021 | .357 | .219 | .267 | .296 |
| 23. | .225 | -.108 | .212 | -.127 | .138 | .187 | .193 | .233 |
| 24. | -.271 | .279 | -.132 | -.019 | -.248 | -.115 | -.241 | -.288 |
| 25. | 1.000 | -.310 | .167 | -.103 | .287 | .270 | .289 | .284 |
| 26. | -.310 | 1.000 | -.194 | .067 | -.312 | -.235 | -.325 | -.375 |
| 27. | .167 | -.194 | 1.000 | -.251 | .467 | .390 | .345 | .405 |
| 28. | -.103 | .067 | -.251 | 1.000 | -.120 | -.153 | -.134 | -.142 |
| 29. | .287 | -.312 | .467 | -.120 | 1.000 | .858 | .939 | .928 |
| 30. | .270 | -.235 | .390 | -.153 | .858 | 1.000 | .787 | .773 |
| 31. | .289 | -.325 | .345 | -.134 | .939 | .787 | 1.000 | .824 |
| 32. | .284 | -.375 | .405 | -.142 | .928 | .773 | .824 | 1.000 |
| 33. | .154 | -.175 | .424 | .025 | .434 | .344 | .415 | .418 |
| 34. | .082 | -.106 | .394 | -.042 | .354 | .305 | .412 | .372 |
| 35. | -.294 | .228 | -.519 | .078 | -.484 | -.375 | -.501 | -.405 |
| 36. | .458 | -.404 | .442 | -.060 | .610 | .434 | .464 | .586 |
| 37. | .155 | -.011 | .263 | -.148 | .096 | .082 | .186 | .066 |
| 38. | .107 | -.061 | .202 | -.076 | .244 | .120 | .157 | .169 |

TABLE C
(Continued)

| | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|
| 1. | .633 | .557 | -.662 | .561 | .269 | .221 |
| 2. | -.081 | -.013 | .104 | -.009 | -.127 | .039 |
| 3. | .256 | .229 | -.379 | .381 | .392 | -.100 |
| 4. | .460 | .409 | -.570 | .695 | .257 | .087 |
| 5. | .333 | .333 | -.420 | .322 | .062 | .154 |
| 6. | .338 | .387 | -.466 | .569 | .106 | .081 |
| 7. | .287 | .302 | -.472 | .426 | .164 | .047 |
| 8. | .401 | .415 | -.469 | .240 | .188 | .050 |
| 9. | .218 | .222 | -.381 | .442 | .152 | .073 |
| 10. | .099 | .087 | -.221 | .402 | -.078 | .047 |
| 11. | .340 | .308 | .527 | .453 | .153 | .104 |
| 12. | .251 | .251 | .376 | .404 | .033 | -.045 |
| 13. | .288 | .323 | -.532 | .575 | .237 | .109 |
| 14. | .198 | .179 | -.247 | .313 | .148 | .101 |
| 15. | .231 | .154 | -.333 | .537 | .242 | .066 |
| 16. | .182 | .079 | -.242 | .308 | .199 | .110 |
| 17. | .353 | .234 | -.288 | .488 | .142 | .069 |
| 18. | .266 | .202 | -.218 | .115 | .003 | .085 |
| 19. | .386 | .234 | -.406 | .469 | .142 | .045 |
| 20. | .297 | .263 | -.326 | .264 | .116 | .053 |
| 21. | -.222 | -.164 | .205 | -.407 | -.101 | -.159 |
| 22. | .128 | .185 | -.269 | .564 | -.015 | .267 |
| 23. | .218 | .196 | -.311 | .327 | .150 | .015 |
| 24. | -.237 | -.210 | .311 | -.370 | -.150 | -.137 |
| 25. | .154 | .082 | -.294 | .458 | .155 | .107 |
| 26. | -.175 | -.106 | .228 | -.404 | -.011 | -.061 |
| 27. | .424 | .394 | -.519 | .442 | .263 | .202 |
| 28. | .025 | -.042 | .078 | -.060 | -.148 | -.076 |
| 29. | .434 | .354 | -.484 | .610 | .096 | .244 |
| 30. | .344 | .305 | -.375 | .434 | .082 | .120 |
| 31. | .415 | .412 | -.501 | .464 | .186 | .157 |
| 32. | .418 | .372 | -.405 | .586 | .066 | .169 |
| 33. | 1.000 | .109 | -.738 | .532 | .266 | .101 |
| 34. | 1.093 | 1.000 | -.714 | .490 | .301 | .051 |
| 35. | -.738 | -.714 | 1.000 | -.636 | -.326 | -.135 |
| 36. | .532 | .490 | -.636 | 1.000 | .154 | .179 |
| 37. | .266 | .301 | -.326 | .154 | 1.000 | .001 |
| 38. | .101 | .514 | -.135 | .179 | .001 | 1.000 |

## TABLE D

## CORRELATION MATRIX WITH COMMUNALITY ESTIMATES FOR LOW-CURIOSITY GIRLS

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. | 1.000 | .045 | .318 | .222 | .009 | .113 | .133 | .274 |
| 2. | .045 | 1.000 | -.005 | -.161 | -.215 | -.082 | .031 | -.005 |
| 3. | .318 | -.005 | 1.000 | .377 | .235 | .216 | .351 | .335 |
| 4. | .222 | -.161 | .377 | 1.000 | .465 | .524 | .397 | .380 |
| 5. | .009 | -.215 | .235 | .465 | 1.000 | .419 | .313 | .351 |
| 6. | .113 | -.082 | .216 | .524 | .419 | 1.000 | .358 | .364 |
| 7. | .133 | .031 | .351 | .397 | .313 | .358 | 1.000 | .488 |
| 8. | .274 | -.005 | .335 | .380 | .351 | .364 | .488 | 1.000 |
| 9. | .158 | -.159 | .096 | .031 | .171 | .006 | .025 | .026 |
| 10. | -.049 | -.138 | .142 | .316 | .162 | .261 | .082 | .068 |
| 11. | .015 | -.220 | .258 | .482 | .367 | .385 | .467 | .476 |
| 12. | -.055 | -.183 | .291 | .445 | .496 | .493 | .373 | .296 |
| 13. | .088 | -.165 | .284 | .555 | .464 | .419 | .378 | .321 |
| 14. | .015 | -.161 | .081 | .244 | .225 | .208 | .144 | .227 |
| 15. | .107 | .032 | .015 | .100 | .059 | .001 | -.003 | -.011 |
| 16. | .008 | -.047 | -.008 | .102 | .087 | .043 | -.136 | -.037 |
| 17. | .037 | -.042 | .010 | .066 | .060 | -.024 | -.083 | -.039 |
| 18. | -.031 | -.058 | -.051 | .048 | .089 | -.018 | -.052 | -.159 |
| 19. | .114 | -.102 | .041 | .166 | .086 | .070 | .045 | -.074 |
| 20. | .111 | -.037 | .208 | .091 | .032 | .179 | .209 | .021 |
| 21. | -.099 | .327 | -.110 | -.285 | -.142 | -.229 | -.036 | -.009 |
| 22. | .156 | .010 | .271 | .376 | .264 | .293 | .329 | .289 |
| 23. | -.047 | -.330 | -.015 | .087 | .049 | .010 | -.150 | -.072 |
| 24. | -.035 | -.023 | -.184 | -.259 | -.262 | -.223 | -.181 | -.182 |
| 25. | .130 | -.085 | .300 | .240 | .262 | .206 | .230 | .228 |
| 26. | .040 | .252 | -.180 | -.407 | -.355 | -.204 | -.340 | -.294 |
| 27. | .578 | .078 | .309 | .161 | .083 | .154 | .159 | .210 |
| 28. | -.566 | .133 | -.018 | -.071 | .087 | -.145 | -.074 | -.088 |
| 29. | .263 | .236 | .156 | .150 | .056 | .047 | .128 | .109 |
| 30. | .243 | .268 | .157 | .195 | .123 | .039 | .080 | .178 |
| 31. | .281 | .236 | .189 | .244 | .116 | .073 | .097 | .110 |
| 32. | .340 | .265 | .231 | .195 | .136 | .115 | .139 | .130 |
| 33. | .208 | .016 | .120 | .140 | .071 | .030 | .105 | .169 |
| 34. | .155 | -.013 | .075 | .112 | .070 | -.014 | .015 | .070 |
| 35. | -.423 | -.113 | -.171 | -.305 | -.215 | -.240 | -.271 | -.409 |
| 36. | .278 | -.035 | .260 | .278 | .144 | .169 | .154 | .113 |
| 37. | .233 | -.061 | .085 | -.002 | .006 | -.130 | .043 | .108 |
| 38. | .069 | -.034 | -.001 | .059 | .016 | .106 | .063 | .105 |

TABLE D
(Continued)

| | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| 1. | .158 | -.049 | .015 | -.055 | .088 | .015 | .107 | .008 |
| 2. | -.159 | -.138 | -.220 | -.183 | -.165 | -.161 | .032 | -.047 |
| 3. | .096 | .142 | .258 | .291 | .284 | .081 | .015 | -.008 |
| 4. | .031 | .316 | .482 | .445 | .555 | .244 | .100 | .102 |
| 5. | .171 | .162 | .367 | .496 | .464 | .225 | .059 | .087 |
| 6. | .006 | .261 | .385 | .493 | .419 | .208 | .001 | .043 |
| 7. | .025 | .082 | .467 | .373 | .378 | .144 | -.003 | -.136 |
| 8. | .026 | .068 | .476 | .296 | .321 | .228 | -.011 | -.037 |
| 9. | 1.000 | .096 | .160 | .130 | .151 | .199 | .119 | .144 |
| 10. | .096 | 1.000 | .276 | .307 | .329 | .268 | .132 | .160 |
| 11. | .160 | .276 | 1.000 | .518 | .512 | .301 | -.008 | -.033 |
| 12. | .130 | .307 | .518 | 1.000 | .515 | .356 | .064 | .060 |
| 13. | .151 | .329 | .512 | .515 | 1.000 | .237 | .187 | .171 |
| 14. | .199 | .268 | .301 | .356 | .237 | 1.000 | .007 | .025 |
| 15. | .119 | .132 | -.008 | .064 | .187 | .007 | 1.000 | .125 |
| 16. | .144 | .160 | -.033 | .060 | .171 | .025 | .125 | 1.000 |
| 17. | .169 | .197 | .041 | .063 | .135 | -.026 | .180 | .547 |
| 18. | -.124 | .032 | -.130 | .130 | .016 | -.112 | -.033 | .034 |
| 19. | .135 | .236 | .039 | .163 | .272 | .006 | .220 | .434 |
| 20. | .022 | .083 | .093 | .094 | .068 | .153 | -.037 | -.122 |
| 21. | -.222 | -.333 | -.224 | -.323 | -.288 | -.159 | -.006 | -.292 |
| 22. | .054 | .120 | .301 | .283 | .356 | .090 | -.060 | .078 |
| 23. | .239 | .242 | .105 | .092 | .140 | .072 | .289 | .096 |
| 24. | -.086 | -.129 | -.163 | -.193 | -.260 | .022 | -.078 | -.168 |
| 25. | .155 | .232 | .248 | .299 | .416 | .260 | .131 | .134 |
| 26. | -.086 | -.273 | -.363 | -.311 | -.525 | -.152 | -.100 | -.183 |
| 27. | .061 | -.094 | -.021 | .090 | .096 | .021 | .126 | -.044 |
| 28. | -.082 | .051 | -.022 | -.009 | -.085 | -.073 | -.123 | -.108 |
| 29. | -.063 | -.015 | .037 | .015 | .084 | -.011 | -.153 | .082 |
| 30. | .014 | .019 | .029 | .034 | .148 | .082 | -.152 | .077 |
| 31. | .011 | .037 | -.001 | -.002 | .198 | .017 | -.068 | .067 |
| 32. | -.003 | .005 | .044 | .039 | .089 | .008 | -.060 | .038 |
| 33. | .144 | .161 | .087 | .102 | .062 | -.038 | .075 | .054 |
| 34. | .184 | .088 | .060 | .054 | .102 | -.005 | .031 | .069 |
| 35. | -.138 | -.043 | -.255 | -.173 | -.259 | -.121 | -.085 | -.015 |
| 36. | .124 | .200 | .214 | .228 | .361 | .106 | .127 | .088 |
| 37. | .021 | -.057 | -.017 | -.049 | .097 | .066 | .130 | -.019 |
| 38. | -.012 | .051 | .109 | .040 | -.030 | .009 | -.053 | -.005 |

## TABLE D
(Continued)

| | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|
| 1. | .037 | -.031 | .114 | .110 | -.099 | .156 | -.047 | -.035 |
| 2. | -.042 | -.058 | -.102 | -.037 | .327 | .010 | -.330 | -.023 |
| 3. | .010 | -.051 | .041 | .208 | -.110 | .271 | -.015 | -.184 |
| 4. | .066 | .048 | .166 | .091 | -.285 | .376 | .087 | -.259 |
| 5. | .060 | .089 | .086 | .032 | -.142 | .264 | .049 | -.262 |
| 6. | -.024 | -.018 | .070 | .179 | -.229 | .293 | .010 | -.223 |
| 7. | -.083 | -.052 | .045 | .209 | -.036 | .329 | -.150 | -.181 |
| 8. | -.039 | -.159 | -.074 | .021 | -.009 | .289 | -.072 | -.182 |
| 9. | .169 | -.124 | .135 | .022 | -.222 | .054 | .239 | -.086 |
| 10. | .197 | .032 | .236 | .083 | -.333 | .120 | .242 | -.129 |
| 11. | .041 | -.130 | .039 | .903 | -.224 | .301 | .105 | -.163 |
| 12. | .063 | .130 | .163 | .094 | -.323 | .283 | .092 | -.193 |
| 13. | .135 | .016 | .272 | .068 | -.288 | .356 | .140 | -.260 |
| 14. | -.026 | -.112 | .006 | .153 | -.159 | .090 | .072 | .022 |
| 15. | .180 | -.033 | .220 | -.037 | -.006 | -.060 | .289 | -.078 |
| 16. | .547 | .034 | .434 | -.122 | -.292 | .078 | .096 | -.168 |
| 17. | 1.000 | .091 | .642 | -.059 | -.288 | .001 | .311 | -.327 |
| 18. | .091 | 1.000 | .240 | -.109 | -.220 | .110 | .054 | -.075 |
| 19. | .642 | .240 | 1.000 | .029 | -.266 | .077 | .310 | -.209 |
| 20. | -.059 | -.109 | .029 | 1.000 | .049 | .181 | -.151 | -.118 |
| 21. | -.288 | -.220 | -.266 | .049 | 1.000 | -.221 | -.370 | .140 |
| 22. | .001 | .110 | .077 | .181 | -.221 | 1.000 | -.034 | -.263 |
| 23. | .311 | .054 | .310 | -.151 | -.370 | -.034 | 1.000 | -.133 |
| 24. | -.327 | -.075 | -.209 | -.118 | .140 | -.263 | -.133 | 1.000 |
| 25. | .152 | -.028 | .157 | .292 | -.332 | .313 | .234 | -.431 |
| 26. | -.219 | -.055 | -.269 | -.018 | .309 | -.293 | -.281 | .217 |
| 27. | -.035 | -.048 | -.017 | .315 | .043 | .073 | -.235 | -.011 |
| 28. | -.050 | .090 | -.090 | -.035 | .301 | -.094 | .011 | .028 |
| 29. | .061 | .003 | .026 | .132 | .062 | .053 | -.396 | -.102 |
| 30. | .165 | .028 | .099 | .084 | .065 | .073 | -.245 | -.182 |
| 31. | .071 | .071 | .073 | .044 | -.081 | .144 | -.182 | -.091 |
| 32. | .030 | -.017 | .039 | .165 | .113 | .196 | -.428 | -.120 |
| 33. | .096 | -.015 | .075 | -.036 | -.128 | .109 | .172 | -.110 |
| 34. | .040 | .012 | .028 | -.045 | -.099 | .120 | .121 | -.022 |
| 35. | -.118 | -.038 | -.122 | -.100 | .017 | -.173 | .049 | .156 |
| 36. | .116 | .041 | .191 | .114 | -.274 | .241 | .251 | -.215 |
| 37. | .071 | -.056 | .141 | .070 | -.014 | -.154 | .201 | .027 |
| 38. | -.007 | -.118 | -.045 | .165 | -.044 | .081 | -.067 | -.010 |

TABLE D
(Continued)

| | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|
| 1. | .130 | .040 | .578 | -.566 | .263 | .243 | .281 | .340 |
| 2. | -.085 | .252 | .078 | .133 | .236 | .268 | .236 | .265 |
| 3. | .300 | -.180 | .309 | -.018 | .156 | .157 | .189 | .231 |
| 4. | .240 | -.407 | .161 | -.071 | .150 | .195 | .244 | .195 |
| 5. | .262 | -.355 | .083 | .087 | .056 | .123 | .116 | .136 |
| 6. | .206 | -.204 | .154 | -.145 | .047 | .039 | .073 | .115 |
| 7. | .230 | -.340 | .159 | -.074 | .128 | .080 | .097 | .139 |
| 8. | .228 | -.294 | .210 | -.088 | .109 | .178 | .110 | .130 |
| 9. | .155 | -.086 | .061 | -.082 | -.063 | .014 | .011 | -.003 |
| 10. | .232 | -.273 | -.094 | .051 | -.015 | .019 | .037 | .005 |
| 11. | .248 | -.363 | -.021 | -.022 | .037 | .029 | -.001 | .044 |
| 12. | .299 | -.311 | .090 | -.009 | .015 | .034 | -.002 | .039 |
| 13. | .416 | -.525 | .096 | -.085 | .084 | .148 | .198 | .089 |
| 14. | .260 | -.152 | .021 | -.073 | -.011 | .082 | .017 | .008 |
| 15. | .131 | -.100 | .126 | -.123 | -.153 | -.152 | -.068 | -.060 |
| 16. | .134 | -.183 | -.044 | -.108 | .082 | .077 | .067 | .038 |
| 17. | .152 | -.219 | -.035 | -.050 | .061 | .165 | .071 | .030 |
| 18. | -.028 | -.055 | -.048 | .090 | .003 | .028 | .071 | -.017 |
| 19. | .157 | -.269 | -.017 | -.090 | .026 | .099 | .073 | .039 |
| 20. | .292 | -.018 | .315 | -.035 | .132 | .084 | .044 | .165 |
| 21. | -.332 | .309 | .043 | .301 | .062 | .065 | -.081 | .113 |
| 22. | .313 | -.293 | .073 | -.094 | .053 | .073 | .144 | .196 |
| 23. | .234 | -.281 | -.235 | .011 | -.396 | -.245 | -.182 | -.428 |
| 24. | -.431 | .217 | -.011 | .028 | -.102 | -.182 | -.091 | -.120 |
| 25. | 1.000 | -.280 | .142 | -.122 | .047 | .134 | .118 | .088 |
| 26. | -.280 | 1.000 | .120 | -.121 | .064 | .028 | -.056 | .099 |
| 27. | .142 | .120 | 1.000 | -.309 | .234 | .226 | .246 | .350 |
| 28. | -.122 | -.121 | -.309 | 1.000 | -.063 | .010 | -.096 | -.060 |
| 29. | .047 | .064 | .234 | -.063 | 1.000 | .621 | .496 | .600 |
| 30. | .134 | .028 | .226 | .010 | .621 | 1.000 | .577 | .640 |
| 31. | .118 | -.056 | .246 | -.096 | .496 | .577 | 1.000 | .541 |
| 32. | .088 | .099 | .350 | -.060 | .600 | .640 | .541 | 1.000 |
| 33. | .060 | -.138 | .059 | -.084 | .021 | .111 | .064 | .001 |
| 34. | .015 | -.130 | .030 | -.074 | .047 | .098 | .080 | .016 |
| 35. | -.124 | .013 | -.400 | .251 | -.218 | -.274 | -.206 | -.281 |
| 36. | .327 | -.180 | .161 | -.131 | .096 | .162 | .181 | .158 |
| 37. | .239 | -.138 | .157 | -.176 | .006 | .198 | .064 | .096 |
| 38. | .030 | -.042 | -.011 | -.148 | .002 | .037 | -.100 | .058 |

TABLE D
(Continued)

| | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|
| 1. | .208 | .155 | -.423 | .278 | .233 | .069 |
| 2. | .016 | -.013 | -.113 | -.035 | -.061 | -.034 |
| 3. | .120 | .075 | -.171 | .260 | .085 | -.001 |
| 4. | .140 | .112 | -.305 | .278 | -.002 | .059 |
| 5. | .071 | .070 | -.215 | .144 | .006 | .016 |
| 6. | .030 | -.014 | -.240 | .169 | -.130 | .106 |
| 7. | .105 | .015 | -.271 | .154 | .043 | .063 |
| 8. | .169 | .070 | -.409 | .113 | .108 | .105 |
| 9. | .144 | .184 | -.138 | .124 | .021 | -.012 |
| 10. | .161 | .088 | -.043 | .200 | -.057 | .051 |
| 11. | .087 | .060 | -.255 | .214 | -.017 | .109 |
| 12. | .102 | .054 | -.173 | .228 | -.049 | .040 |
| 13. | .062 | .102 | -.259 | .361 | .097 | -.030 |
| 14. | -.038 | -.005 | -.121 | .106 | .066 | .009 |
| 15. | .075 | .031 | -.085 | .127 | .130 | -.053 |
| 16. | .054 | .069 | -.015 | .088 | -.019 | -.005 |
| 17. | .096 | .040 | -.118 | .116 | .071 | -.007 |
| 18. | -.015 | .012 | -.038 | .041 | -.056 | -.118 |
| 19. | .075 | .028 | -.122 | .191 | .141 | -.045 |
| 20. | -.036 | -.045 | -.100 | .114 | .070 | .165 |
| 21. | -.128 | -.099 | .017 | -.274 | -.014 | -.044 |
| 22. | .109 | .120 | -.173 | .241 | -.154 | .081 |
| 23. | .172 | .121 | .049 | .251 | .201 | -.067 |
| 24. | -.110 | -.022 | .156 | -.215 | .027 | -.010 |
| 25. | .060 | .015 | -.124 | .327 | .239 | .030 |
| 26. | -.138 | -.130 | .013 | -.180 | -.138 | -.042 |
| 27. | .059 | .030 | -.400 | .161 | .157 | -.011 |
| 28. | -.084 | -.074 | .251 | -.131 | -.176 | -.148 |
| 29. | .021 | .047 | -.218 | .096 | .006 | .002 |
| 30. | .111 | .098 | -.274 | .162 | .198 | .037 |
| 31. | .064 | .080 | -.206 | .181 | .064 | -.100 |
| 32. | .001 | .016 | -.281 | .158 | .096 | .058 |
| 33. | 1.000 | .628 | -.191 | .212 | .042 | .201 |
| 34. | .628 | 1.000 | -.162 | .195 | -.043 | .139 |
| 35. | -.191 | -.162 | 1.000 | -.309 | -.108 | .066 |
| 36. | .212 | .195 | -.309 | 1.000 | .156 | -.028 |
| 37. | .042 | -.043 | -.108 | .156 | 1.000 | -.032 |
| 38. | .201 | .139 | .066 | -.028 | -.032 | 1.000 |

## TABLE E

## MATRIX OF COMMON FACTOR COEFFICIENTS FOR HIGH CURIOSITY BOYS

|  | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. | .498 | -.020 | .295 | .406 | -.324 |
| 2. | -.004 | -.295 | .091 | .076 | .087 |
| 3. | .511 | -.067 | -.333 | .024 | -.019 |
| 4. | .510 | -.210 | -.159 | .277 | -.132 |
| 5. | .387 | -.131 | -.329 | .018 | -.240 |
| 6. | .644 | -.235 | -.241 | .102 | -.238 |
| 7. | .568 | -.304 | -.488 | .188 | .085 |
| 8. | .504 | -.263 | -.419 | .080 | .127 |
| 9. | .480 | .334 | -.044 | -.374 | -.230 |
| 10. | .608 | .206 | -.219 | -.290 | -.167 |
| 11. | .738 | .049 | -.330 | .013 | -.125 |
| 12. | .557 | -.013 | -.349 | -.004 | -.282 |
| 13. | .705 | -.020 | -.264 | .132 | -.062 |
| 14. | .457 | .011 | -.186 | .000 | -.359 |
| 15. | .232 | .407 | .395 | .266 | -.035 |
| 16. | .487 | .525 | .340 | .001 | -.063 |
| 17. | .531 | .587 | .311 | -.172 | -.078 |
| 18. | .227 | .248 | .197 | -.204 | -.156 |
| 19. | .459 | .550 | .402 | -.223 | -.821 |
| 20. | .311 | -.037 | .034 | -.149 | -.025 |
| 21. | -.537 | -.080 | .256 | .377 | -.002 |
| 22. | .445 | -.177 | .001 | .003 | .422 |
| 23. | .135 | .579 | .137 | -.143 | -.174 |
| 24. | -.482 | -.119 | .192 | .029 | -.274 |
| 25. | .404 | .013 | -.090 | -.336 | .353 |
| 26. | -.556 | -.057 | .183 | .007 | -.421 |
| 27. | .425 | -.007 | .443 | .459 | -.244 |
| 28. | -.120 | .025 | .070 | -.549 | .261 |
| 29. | .429 | -.708 | .461 | -.240 | -.783 |
| 30. | .358 | -.630 | .449 | -.285 | -.032 |
| 31. | .450 | -.711 | .441 | -.273 | -.083 |
| 32. | .456 | -.696 | .514 | -.037 | -.011 |
| 33. | .574 | .225 | .273 | .284 | .435 |
| 34. | .554 | .188 | .259 | .325 | .452 |
| 35. | -.574 | -.133 | .032 | -.221 | -.112 |
| 36. | .740 | .104 | .115 | -.112 | .199 |
| 37. | .301 | .142 | .235 | .027 | .131 |
| 38. | -.003 | .129 | .052 | -.258 | -.148 |

### TABLE E
(Continued)

| | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|
| 1. | .123 | -.200 | -.031 | .015 | .044 |
| 2. | .483 | .204 | .365 | .316 | .188 |
| 3. | .250 | -.098 | -.202 | -.011 | .248 |
| 4. | .224 | -.068 | .191 | -.082 | .200 |
| 5. | -.142 | .255 | .141 | -.376 | .173 |
| 6. | -.013 | .058 | .195 | -.059 | -.076 |
| 7. | -.093 | .033 | .013 | -.119 | .074 |
| 8. | .057 | -.044 | -.068 | -.070 | -.184 |
| 9. | .009 | -.102 | -.057 | .187 | -.184 |
| 10. | .333 | -.179 | -.118 | .130 | -.175 |
| 11. | -.223 | -.075 | .010 | -.011 | -.039 |
| 12. | -.156 | .048 | .069 | -.087 | -.179 |
| 13. | -.135 | .204 | .084 | .145 | .028 |
| 14. | .056 | .071 | -.104 | .398 | -.202 |
| 15. | -.105 | -.139 | .106 | -.003 | .088 |
| 16. | .112 | .184 | .135 | -.321 | .130 |
| 17. | .135 | .080 | -.043 | -.212 | .097 |
| 18. | .020 | .627 | -.046 | .175 | -.051 |
| 19. | .052 | .110 | -.177 | -.131 | .052 |
| 20. | .541 | .063 | .315 | .150 | .066 |
| 21. | .107 | .205 | .167 | .016 | .099 |
| 22. | .201 | -.019 | -.419 | -.045 | .151 |
| 23. | -.128 | -.051 | -.065 | .026 | .237 |
| 24. | -.011 | -.166 | -.123 | -.220 | -.038 |
| 25. | -.197 | -.232 | -.020 | .138 | .376 |
| 26. | -.253 | .081 | .106 | .174 | -.138 |
| 27. | .120 | -.228 | -.077 | -.112 | -.041 |
| 28. | .025 | .097 | .477 | -.269 | -.172 |
| 29. | -.032 | .069 | -.029 | -.053 | .009 |
| 30. | -.179 | .039 | -.030 | -.101 | -.080 |
| 31. | -.130 | -.029 | .012 | -.013 | -.020 |
| 32. | .010 | -.030 | -.049 | .044 | .070 |
| 33. | -.002 | -.044 | .121 | -.012 | -.391 |
| 34. | -.025 | .015 | .109 | .013 | -.378 |
| 35. | .441 | -.110 | -.283 | -.013 | -.234 |
| 36. | -.028 | -.012 | -.078 | .037 | -.059 |
| 37. | -.353 | -.043 | .089 | .532 | .192 |
| 38. | .005 | -.646 | .497 | .001 | .010 |

## TABLE F

## MATRIX OF COMMON FACTOR COEFFICIENTS FOR LOW-CURIOSITY BOYS

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. | .540 | -.336 | -.355 | .236 | -.187 |
| 2. | -.005 | .002 | -.051 | .354 | -.211 |
| 3. | .531 | .080 | .067 | .065 | -.401 |
| 4. | .754 | .249 | .244 | -.040 | -.073 |
| 5. | .627 | .332 | .282 | .073 | -.025 |
| 6. | .906 | .255 | .222 | -.038 | -.047 |
| 7. | .673 | .397 | .215 | .102 | .052 |
| 8. | .544 | .419 | .042 | .368 | -.100 |
| 9. | .737 | .032 | -.159 | -.191 | -.156 |
| 10. | .815 | .004 | .035 | -.103 | -.192 |
| 11. | .836 | .359 | .060 | .024 | -.139 |
| 12. | .651 | .238 | .245 | .006 | -.050 |
| 13. | .857 | .191 | -.035 | -.038 | .007 |
| 14. | .763 | .040 | .090 | -.098 | -.024 |
| 15. | .302 | -.297 | .071 | .295 | -.236 |
| 16. | .654 | -.097 | -.470 | -.102 | .144 |
| 17. | .517 | -.226 | -.523 | -.342 | .103 |
| 18. | .254 | -.210 | -.372 | -.274 | .022 |
| 19. | .762 | -.176 | -.498 | -.264 | .032 |
| 20. | .297 | .095 | -.215 | .041 | .242 |
| 21. | -.631 | -.007 | -.094 | .096 | .121 |
| 22. | .557 | .289 | -.023 | -.268 | -.141 |
| 23. | .290 | -.303 | -.075 | -.320 | .118 |
| 24. | -.589 | -.004 | -.009 | .059 | -.299 |
| 25. | .507 | -.001 | .033 | -.207 | -.038 |
| 26. | -.616 | -.323 | -.040 | .097 | -.314 |
| 27. | .472 | -.370 | -.320 | .290 | -.294 |
| 28. | -.253 | .276 | .490 | -.201 | .343 |
| 29. | .340 | -.536 | .541 | -.026 | .026 |
| 30. | .362 | -.586 | .503 | -.019 | -.046 |
| 31. | .477 | -.520 | .522 | -.157 | .022 |
| 32. | .469 | -.557 | .432 | .059 | .011 |
| 33. | .561 | -.178 | -.064 | .467 | .472 |
| 34. | .546 | -.156 | -.051 | .490 | .475 |
| 35. | -.564 | -.040 | .223 | -.284 | -.247 |
| 36. | .847 | -.216 | -.082 | -.008 | .023 |
| 37. | .203 | -.089 | .108 | .179 | .159 |
| 38. | .135 | .023 | -.127 | .298 | -.201 |

## TABLE F
## (Continued)

| | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|
| 1. | .188 | .094 | -.103 | .218 | -.073 |
| 2. | -.561 | -.038 | -.165 | -.379 | .275 |
| 3. | -.094 | -.277 | -.015 | .075 | .091 |
| 4. | -.135 | -.011 | .055 | .053 | .144 |
| 5. | -.183 | -.034 | -.202 | .082 | -.346 |
| 6. | -.128 | .161 | .016 | .030 | -.003 |
| 7. | -.040 | .173 | .161 | .011 | -.079 |
| 8. | .008 | .038 | .085 | .069 | .138 |
| 9. | .098 | -.083 | -.110 | -.061 | .210 |
| 10. | -.093 | .029 | .087 | -.157 | .181 |
| 11. | .049 | -.054 | -.055 | -.175 | -.012 |
| 12. | -.059 | -.104 | -.215 | .091 | -.020 |
| 13. | .165 | .074 | .037 | -.019 | .025 |
| 14. | .067 | -.236 | -.007 | -.067 | .269 |
| 15. | .072 | -.427 | -.178 | -.005 | -.210 |
| 16. | -.260 | .178 | -.012 | -.065 | -.156 |
| 17. | -.390 | .048 | -.096 | -.102 | -.201 |
| 18. | -.211 | .054 | .356 | .184 | .223 |
| 19. | -.218 | -.063 | .027 | -.018 | -.148 |
| 20. | .219 | .428 | .386 | -.203 | -.040 |
| 21. | -.031 | -.072 | -.046 | -.188 | .273 |
| 22. | .064 | .224 | .004 | .204 | -.109 |
| 23. | .230 | -.382 | -.302 | -.105 | -.103 |
| 24. | -.269 | -.123 | -.134 | .154 | -.061 |
| 25. | .545 | -.079 | -.078 | -.046 | .155 |
| 26. | -.135 | -.078 | -.008 | -.150 | -.125 |
| 27. | .114 | -.052 | -.065 | .251 | .023 |
| 28. | -.254 | -.330 | .020 | -.088 | -.175 |
| 29. | -.107 | .134 | .093 | .068 | .109 |
| 30. | -.019 | .134 | .158 | -.184 | .064 |
| 31. | -.085 | -.029 | .083 | -.011 | -.135 |
| 32. | .024 | .047 | .147 | .036 | -.072 |
| 33. | -.042 | .045 | -.160 | .185 | -.016 |
| 34. | -.057 | .040 | -.093 | .098 | .084 |
| 35. | .011 | .226 | -.099 | .160 | -.036 |
| 36. | .038 | -.037 | .090 | -.117 | .048 |
| 37. | .131 | .314 | -.669 | -.260 | .186 |
| 38. | .252 | .333 | .200 | -.559 | -.386 |

### TABLE G

### MATRIX OF COMMON FACTOR COEFFICIENTS FOR HIGH-CURIOSITY GIRLS

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. | .701 | .409 | .167 | -.098 | -.231 |
| 2. | -.058 | -.258 | .108 | .032 | -.392 |
| 3. | .532 | -.302 | -.007 | -.245 | -.117 |
| 4. | .875 | -.220 | -.017 | -.038 | .042 |
| 5. | .597 | -.313 | .208 | -.026 | .181 |
| 6. | .703 | -.325 | .152 | -.047 | .088 |
| 7. | .673 | -.315 | .142 | -.188 | .022 |
| 8. | .568 | -.284 | .487 | -.159 | .009 |
| 9. | .542 | -.016 | -.234 | -.111 | -.178 |
| 10. | .541 | -.462 | -.289 | -.095 | .027 |
| 11. | .676 | -.182 | -.113 | -.218 | .022 |
| 12. | .604 | -.307 | .045 | .064 | -.062 |
| 13. | .800 | -.331 | -.008 | -.028 | .015 |
| 14. | .572 | -.319 | -.023 | .042 | -.104 |
| 15. | .386 | .240 | -.121 | -.044 | -.051 |
| 16. | .391 | .231 | -.587 | -.055 | .087 |
| 17. | .541 | .238 | -.568 | -.091 | .140 |
| 18. | .216 | .352 | -.001 | -.051 | .174 |
| 19. | .541 | .303 | -.531 | -.231 | .135 |
| 20. | .339 | .046 | -.024 | -.274 | .195 |
| 21. | -.461 | .029 | .210 | -.192 | -.127 |
| 22. | .509 | -.449 | .054 | .146 | -.166 |
| 23. | .363 | .199 | -.272 | -.186 | -.084 |
| 24. | -.430 | .080 | .116 | .033 | -.097 |
| 25. | .445 | -.042 | -.369 | .056 | -.069 |
| 26. | -.510 | .309 | .141 | -.150 | .074 |
| 27. | .562 | .330 | .180 | -.002 | -.378 |
| 28. | -.125 | -.234 | -.030 | -.129 | .658 |
| 29. | .755 | .210 | .135 | .574 | .079 |
| 30. | .624 | .258 | .081 | .541 | .132 |
| 31. | .698 | .215 | .128 | .514 | .151 |
| 32. | .742 | .173 | .056 | .504 | .132 |
| 33. | .629 | .448 | .360 | -.334 | .223 |
| 34. | .582 | .372 | .478 | -.345 | .174 |
| 35. | -.745 | -.259 | -.237 | .300 | -.004 |
| 36. | .795 | .090 | -.128 | -.002 | -.124 |
| 37. | .266 | .279 | .068 | -.282 | -.195 |
| 38. | .188 | .098 | .020 | .239 | -.134 |

TABLE G
(Continued)

| | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|
| 1. | -.060 | -.054 | .173 | -.150 | .050 | .099 |
| 2. | .433 | .374 | .159 | -.158 | .033 | -.187 |
| 3. | -.082 | .439 | .018 | .264 | .140 | .001 |
| 4. | -.061 | .059 | -.195 | .132 | .028 | .072 |
| 5. | -.087 | -.147 | -.053 | -.274 | .157 | .155 |
| 6. | .131 | .068 | -.090 | .085 | -.123 | .162 |
| 7. | -.237 | .060 | -.059 | .120 | -.013 | .258 |
| 8. | -.192 | .118 | -.016 | -.064 | -.068 | .171 |
| 9. | -.220 | -.281 | .356 | -.006 | .038 | -.225 |
| 10. | .038 | .180 | .227 | -.235 | -.066 | .043 |
| 11. | -.291 | -.045 | .125 | .066 | .220 | .011 |
| 12. | -.148 | .017 | .104 | -.269 | -.176 | -.345 |
| 13. | -.111 | -.174 | -.080 | .073 | -.092 | .079 |
| 14. | -.043 | -.201 | .149 | -.177 | -.341 | -.037 |
| 15. | .256 | .198 | -.243 | -.088 | -.171 | .173 |
| 16. | -.083 | .065 | -.209 | -.229 | .059 | .153 |
| 17. | .055 | .171 | -.087 | -.251 | .066 | .080 |
| 18. | -.008 | .045 | .649 | .381 | -.154 | .124 |
| 19. | -.010 | .159 | .115 | -.092 | -.035 | .069 |
| 20. | .324 | .050 | .125 | .169 | -.404 | .205 |
| 21. | -.269 | .211 | -.099 | .007 | .016 | .080 |
| 22. | .273 | -.165 | -.031 | .126 | .358 | -.014 |
| 23. | -.303 | -.180 | -.028 | .033 | .262 | -.172 |
| 24. | -.301 | .450 | .081 | -.014 | .293 | .178 |
| 25. | .116 | .050 | -.140 | .559 | .016 | -.184 |
| 26. | -.159 | .044 | -.010 | -.023 | -.018 | .193 |
| 27. | .031 | .023 | .200 | -.167 | -.110 | .064 |
| 28. | .309 | .046 | -.043 | -.139 | .051 | .001 |
| 29. | .018 | .127 | -.067 | .015 | -.028 | .061 |
| 30. | -.167 | .157 | .001 | .028 | -.033 | .016 |
| 31. | -.135 | .038 | -.082 | .033 | -.061 | -.128 |
| 32. | -.073 | .100 | -.024 | -.014 | -.030 | -.041 |
| 33. | .209 | .045 | -.012 | -.082 | .144 | -.201 |
| 34. | .177 | .008 | -.037 | -.067 | .145 | -.250 |
| 35. | -.040 | .040 | .045 | -.071 | -.092 | .051 |
| 36. | .302 | .027 | -.109 | .093 | .166 | -.092 |
| 37. | -.113 | -.290 | -.441 | .093 | -.302 | .043 |
| 38. | .326 | -.406 | .180 | -.026 | .345 | .503 |

## TABLE H

## MATRIX OF COMMON FACTOR COEFFICIENTS FOR LOW-CURIOSITY GIRLS

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. | .367 | .459 | .313 | -.523 | -.068 |
| 2. | -.158 | .499 | .074 | .204 | .135 |
| 3. | .514 | .189 | -.107 | -.095 | -.051 |
| 4. | .731 | -.022 | -.161 | .093 | .051 |
| 5. | .583 | -.113 | -.240 | .185 | .018 |
| 6. | .577 | -.037 | -.326 | .039 | -.057 |
| 7. | .549 | .127 | -.405 | -.034 | .001 |
| 8. | .555 | .168 | -.335 | -.159 | .088 |
| 9. | .248 | -.174 | .206 | -.235 | .054 |
| 10. | .410 | -.320 | .054 | .149 | .069 |
| 11. | .617 | -.175 | -.387 | -.008 | .058 |
| 12. | .631 | -.232 | -.284 | .119 | -.024 |
| 13. | .737 | -.176 | -.078 | .121 | -.079 |
| 14. | .356 | -.127 | -.211 | -.072 | -.190 |
| 15. | .142 | -.206 | .273 | -.235 | -.179 |
| 16. | .210 | -.210 | .524 | .265 | -.014 |
| 17. | .254 | -.252 | .652 | .261 | -.061 |
| 18. | .033 | -.113 | .192 | .311 | .040 |
| 19. | .329 | -.270 | .581 | .211 | -.148 |
| 20. | .232 | .213 | -.152 | -.123 | -.286 |
| 21. | -.431 | .412 | -.266 | .033 | .014 |
| 22. | .518 | .031 | -.160 | .092 | .132 |
| 23. | .154 | -.671 | .316 | -.210 | -.009 |
| 24. | -.434 | .061 | -.153 | -.234 | .029 |
| 25. | .560 | -.112 | .084 | -.042 | -.279 |
| 26. | -.527 | .392 | .050 | -.161 | -.082 |
| 27. | .302 | .525 | .101 | -.385 | -.252 |
| 28. | -.218 | -.151 | -.265 | .556 | .173 |
| 29. | .238 | .651 | .164 | .327 | .052 |
| 30. | .320 | .610 | .267 | .334 | .085 |
| 31. | .322 | .529 | .257 | .279 | .047 |
| 32. | .309 | .713 | .146 | .251 | -.022 |
| 33. | .269 | -.017 | .219 | -.300 | .721 |
| 34. | .210 | -.009 | .206 | -.254 | .750 |
| 35. | -.483 | -.334 | -.107 | .228 | -.030 |
| 36. | .500 | -.001 | .236 | -.149 | .028 |
| 37. | .136 | .074 | .265 | -.289 | -.330 |
| 38. | .088 | .027 | -.098 | -.185 | .289 |

TABLE H
(Continued)

| | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|
| 1. | .159 | .154 | -.023 | -.007 | .083 | .024 |
| 2. | -.248 | .105 | .230 | .155 | -.248 | -.081 |
| 3. | -.126 | .010 | .181 | -.176 | -.043 | .068 |
| 4. | .083 | .151 | -.088 | -.002 | .031 | -.177 |
| 5. | -.064 | .126 | -.152 | .051 | -.041 | .130 |
| 6. | .294 | .109 | .033 | .161 | -.130 | -.150 |
| 7. | -.134 | .144 | .163 | .113 | .160 | -.013 |
| 8. | -.203 | .138 | -.057 | .279 | .242 | .129 |
| 9. | -.064 | -.252 | -.246 | .092 | -.328 | .496 |
| 10. | .066 | -.257 | -.089 | -.056 | -.259 | -.412 |
| 11. | -.054 | -.066 | -.151 | .149 | .074 | .037 |
| 12. | .119 | .041 | -.116 | -.016 | -.173 | -.089 |
| 13. | -.099 | .089 | -.092 | -.012 | .014 | -.073 |
| 14. | .015 | -.388 | -.420 | .013 | -.187 | -.020 |
| 15. | -.305 | .229 | .081 | .222 | -.326 | -.335 |
| 16. | .187 | -.067 | -.009 | .389 | .025 | .108 |
| 17. | -.026 | -.040 | .092 | .354 | .048 | .044 |
| 18. | .282 | .454 | .051 | -.435 | .030 | -.097 |
| 19. | .026 | .099 | .088 | .172 | .049 | -.181 |
| 20. | .060 | -.434 | .428 | -.128 | -.174 | -.164 |
| 21. | -.445 | .072 | .096 | .244 | -.119 | -.096 |
| 22. | .215 | .083 | .358 | -.134 | .010 | .237 |
| 23. | -.228 | .013 | -.036 | -.188 | -.001 | .003 |
| 24. | .118 | .002 | -.475 | -.070 | .048 | -.311 |
| 25. | -.157 | -.289 | .291 | -.223 | -.003 | .182 |
| 26. | .221 | -.024 | -.032 | .033 | -.359 | .053 |
| 27. | .092 | .136 | .056 | .004 | -.176 | -.065 |
| 28. | -.462 | -.054 | .039 | -.137 | -.187 | -.033 |
| 29. | .067 | -.153 | -.136 | .002 | .064 | -.028 |
| 30. | -.142 | -.210 | -.192 | -.058 | .105 | -.010 |
| 31. | .004 | -.014 | -.208 | -.222 | .044 | .008 |
| 32. | .027 | -.126 | -.067 | -.009 | -.035 | -.048 |
| 33. | -.125 | -.050 | .083 | -.042 | -.019 | -.104 |
| 34. | -.056 | -.064 | -.026 | -.112 | -.903 | -.012 |
| 35. | .063 | -.307 | .126 | -.161 | .171 | -.057 |
| 36. | -.104 | .024 | .069 | -.358 | -.158 | -.037 |
| 37. | -.449 | -.091 | -.140 | -.175 | .452 | -.154 |
| 38. | .254 | -.426 | .277 | .258 | .291 | -.270 |